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16/28, C12Q 1/68, G01N 33/68, A61K 31/7088, 38/17,
39/395, 48/00

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AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,
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HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
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patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,
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*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: HUMAN G PROTEIN-COUPLED RECEPTORS

(57) Abstract: The present invention provides a gene encoding a G protein-coupled receptor termed nGPCR-x; constructs and re-
combinant host cells incorporating the genes; the nGPCR-x polypeptides encoded by the gene; antibodies to the nGPCR-x polypep-
tides; and methods of making and using all of the foregoing.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/05989

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C12N1/19 C12N1/21 C12N5/10 C12N15/63
C12N15/86 C12N15/11 C07K14/705 C07K16/28 C12Q1/68
G01N33/68 A61K31/7088 A61K38/17 A61K39/395 A61K48/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K C12Q G01N A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EMBL, SEQUENCE SEARCH, EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, CHEM ABS Dat

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|----------------------------------|
| X | DATABASE EMBL [Online] accession: AC022042, 26 January 2000 (2000-01-26) BIRREN B ET AL: "Homo sapiens clone RP11-6L15, WORKING DRAFT SEQUENCE, 18 unordered pieces." XP002180041 | 1,3-22, 27,30, 32-34 |
| X | DATABASE EMBL [Online] accession: AQ070364, 5 August 1998 (1998-08-05) MAHAIRAS G G ET AL: "HS 3035 B1 C08 MF CIT Approved Human Genomic Sperm Library D Homo sapiens genomic clone Plate=3035 Col=15 Row=F, genomic survey sequence." XP002180042 | 1,3,5-7, 9-22,27, 30,32-34 |
| | --- | |
| | -/-- | |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

12 October 2001

Date of mailing of the international search report

16. 01. 02

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INTERNATIONAL SEARCH REPORT

International Application No

PC1, US 01/05989

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|---|
| E | <p>WO 01 62797 A (PARODI LUIS A ;LIND PETER (SE); UPJOHN CO (US); VOGELI GABRIEL (US) 30 August 2001 (2001-08-30)</p> <p>(L: Priority) claims 1-141; examples 1-15 SEQ ID NO: 23; SEQ ID NO: 83</p> | <p>1,3,5-7, 9-30, 32-40, 42-48, 50-71, 74-78,80</p> |
| A | <p>SAKURAI T ET AL: "Orexins and orexin receptors: A family of hypothalamic neuropeptides and G Protein-coupled receptors that regulate feeding behaviour" CELL, CELL PRESS, CAMBRIDGE, NA, US, vol. 92, 20 February 1998 (1998-02-20), pages 573-585, XP002105412 ISSN: 0092-8674 cited in the application</p> | |
| A | <p>HERZOG H ET AL: "CLONED HUMAN NEUROPEPTIDE Y RECEPTOR COUPLES TO TWO DIFFERENT SECOND MESSENGER SYSTEMS" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 89, no. 13, 1992, pages 5794-5798, XP002180040 1992 ISSN: 0027-8424</p> | |
| A | <p>WO 99 55732 A (AHMAD SULTAN ;CAO JACK (CA); DONNELL DAJAN O (CA); WALKER PHILIPPE) 4 November 1999 (1999-11-04)</p> | |

INTERNATIONAL SEARCH REPORT

I: International application No.
PCT/US 01/05989

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 39 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: in part: 44,47,52,75
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Claims 1-81, partially, as far as is applicable.

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: in part: 44,47,52,75

Claims 44, 47 and 52 refer to a compound identified by the method of claims 40, 45 and 48 respectively, without giving a true technical characterization. The claims cover all compounds having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such compounds, namely: antibodies which bind to an epitope on a polypeptide of claim 30 and antisense oligonucleotides. In consequence, the scope of said claims is ambiguous and vague, and their subject-matter is not sufficiently disclosed and supported (Art. 5 and 6 PCT). An attempt is made to define the compound by reference to a result to be achieved.

This lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to: antibodies which bind to an epitope on a polypeptide of claim 30 and antisense oligonucleotides.

The above comment also applies for a binding partner of nGPCR-x as referred to in claim 75.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: Invention 1: claims: in part: 1-81; all as far as applicable

G protein-coupled receptor (nGPCR-x) polynucleotide and polypeptide relating to SEQ ID NOs 1 and 111, and fragments and variants thereof. Expression vector and host cell comprising such a polynucleotide. Antisense oligonucleotide directed to a region of such a polynucleotide. Method of producing such a polypeptide. Antibody which binds to an epitope on such a polypeptide. Composition comprising such a polynucleotide, such an expression vector, such a polypeptide or such an antibody. Method of inducing an immune response by using such a polypeptide. Method for identifying a compound which binds such a polypeptide or such a polynucleotide. Method for identifying a compound which modulates the activity of such a polypeptide. Method for identifying an animal homolog of such a polynucleotide or polypeptide. Method of screening to diagnose a disorder affecting the brain or genetic predisposition thereof. Method of screening for a nGPCR-x hereditary mental disorder genotype. Kit for carrying out the aforementioned screening. Method of identifying a nGPCR-x allelic variant that correlates with a mental disorder. Method to identify compounds useful for the treatment of a mental disorder. Method for identifying a compound useful as a modulator of binding between nGPCR-x and a binding partner of nGPCR-x. Method of purifying a G protein using such a polypeptide.

2. Claims: Inventions 2-110: claims: in part: 1-81; all as far as applicable

As invention 1, but limited to subject-matter relating to SEQ ID NOs 2-110 and 112-220, wherein:
invention 2 is limited to SEQ ID NOs 2 and 112,
invention 3 is limited to SEQ ID NOs 3 and 113,
...
invention 110 is limited to SEQ ID NOs 110 and 220.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/05989

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|---|---------------------|----------------------------|---------------------|
| WO 0162797 | A | 30-08-2001 | AU 4165801 A | 03-09-2001 |
| | | | AU 5787501 A | 09-07-2001 |
| | | | WO 0148015 A2 | 05-07-2001 |
| | | | WO 0162797 A2 | 30-08-2001 |
| | | | AU 4165501 A | 03-09-2001 |
| ----- | | | | |
| WO 9955732 | A | 04-11-1999 | AU 4298099 A | 16-11-1999 |
| | | | EP 1071714 A1 | 31-01-2001 |
| | | | WO 9955732 A1 | 04-11-1999 |
| ----- | | | | |

SEQUENCE LISTING

<110> Pharmacia & Upjohn Company
Vogeli, Gabriel
Wood, Linda S.
Parodi, Luis
Lind, Peter

<120> Novel G Protein-Coupled Receptors

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 tgcagaatcc tgggagagag atatttccac acatagttac agtatgccct cccggggaac 360
 tcttgacctg gggaaaagag ccaggaaaga tgtgtttgag ctgtgcctgc ctagatgtca 420
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 tcttatttga gcctagtgtg atgagaaggc agatgtgtta agatgtacat ttcttatgtc 540
 ttttttagct tttttttttc aataagaatg tagtatttga ttgtaggaat aaggcttcaa 600
 taatcaagtt tgcttgtatg cttaatgaga gcatgtgatg cct 643

<210> 10
 <211> 542
 <212> DNA
 <213> Homo sapiens

<400> 10
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 tgagacacct cccaccccca ccaccactga cagagacaca cgtggacaca gcagataacc 180
 tggcgctttc ataggtggtg gagcccagca ccagccctgg aaggaggagc agccatccca 240
 gactggggga gggcgtgccc aggtcatatg attcaggagc tgatccctt ccaggtggag 300
 gggcaggtga gttgggggtg tggtagtgac aatgggtggg aggcccgagg agggtaaggt 360
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 ctgtgctcag cacacagcgg tgttgagaac agagacagag cccaagaata gaggcacacg 480
 gggaagtaga caacatcgac actgccacag gggcaggcgg cccatctggt gttggccctg 540
 tg 542

<210> 11
 <211> 735
 <212> DNA
 <213> Homo sapiens

<400> 11
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tggttggaatt ggaatgagct tggggaagca caggcacctc tgaattatat taagatatatt 180
caaagtcttt cacttacctg tccaactca ttacagtcac gatggcacta caggcaaatt 240
ggttacaagt atccagggat gtgatgatgg tgcagagagg cccccaaac accactctc 300
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ggaaatgcct agtcttggtg gtatttaagc attttgaact atttatttga taacttactg 600
gggggggggt taaaaatatg tccacaaaat atttgatatt cctttcagta ggtggagcct 660
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cagtgtgtga ctttg 735

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<210> 12
<211> 712
<212> DNA
<213> Homo sapiens

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<400> 12
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attgtcatca gcatcttcag ggtctccttc ttctcccat gctgccagat ataggtgtgg 180
atgctgatgt catcaacagc attatggatc cacagctttt tggccacatg accataaaca 240
accactagtg ccattaatgg caagatgagg aagagcaaaa acaattctca ggtcaaggta 300
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gtttctagggt tataagacag acagaaagag aaacatcagc tttgtctttt ccctgagacc 420
tacagccagc tattttatgg aagtttggcc gaaggaagat acatatattac tgtttgtgtc 480
tgcattaagc ttaaaatcta gagttaaaaa tccgggagac tttgggttca cctattccag 540
acctctcatg tgatatataa ggaaattatg gccccaaat gtgaagactt atttctaata 600
atcaaagct atgagagtta ttggaaaccg ttatggtaaa tccaagtaa aagaaattta 660
ttttataacc tatatttgga aatgtactat tccagcccct actctgtaag tt 712

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<210> 13
<211> 621

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<212> DNA

<213> Homo sapiens

<400> 13

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tcttctctgtt cccaaatctg aaaaaaaaaa aattcgtaaa aatgccttac gatggatgac    180
tacagcagac gggctgttga gggctgcctc agctcttcag cccagaccag tgacagagct    240
accaacactg cttcacctcc tgcagaggta gaggtacagc caatgagagg aggggggtcag    300
ggatattttt tagccctttc tcatcctacc ctcatgccag tcccagcttt atctaccctt    360
gagtcataatt aagccattca aggatgagtg gatgaagttt ttaatcagga aaaaatactt    420
ccatgcccc ccaatttgaga gtaagaaata gaaaatgagg ctattgtggg tgtcatttct    480
aatctctgga cctcagcctg taccctgggg taagtggag tggaaaaaaa ctacaagaaa    540
acagaaagga gtggtgggga tttgtaaggc ttggatgaga tagtatatat taaaggggaa    600
aacttaatta ctttaccctt a                                     621

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<210> 14

<211> 586

<212> DNA

<213> Homo sapiens

<400> 14

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agccaattaa ttacagcctt ttacataaaa cattaccac aatacatata tagctacaca    240
gaaagacaga agaagattac tgcagtaatt gcaagatttt ttatttgtca gtttttaagt    300
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gtctctggtg cctcctgttt ttcccaagga gctcaggctc taagagcttc aatatctgct    420
tttaattaaa ctgattttta accatagcac tctttaataa aagttctttt agaatttctt    480
atgccaaaaca gccaatattt ctggtttttg aactttatca aaggtaacct cccaggtgct    540
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<210> 15

<211> 542

<212> DNA

<213> Homo sapiens

<400> 15
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cattgataca aggatttagt gagcacctag aataagaccc agcacaaagg tagcactcaa 180
tgaatatattc aggatagatg aggagataga tggacagatg gatggaagga ggggaaggaa 240
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aacagacatt ctggcctgcc agtacttttg aaacctctta aatttttaaaa ctcacaaatg 360
catactgcac aaatgaccca ttcagggttct gtgagcctga gctctcttga atacttgact 420
gtcttatgac aagtaagtgt agatgaagct ggccctcctc ttgaatgcc tgaggctcat 480
ctaccacat ttatacttgg ttttgtcctt caaatccatt caggtaagcc ctataatgaa 540
at 542

<210> 16
<211> 275
<212> DNA
<213> Homo sapiens

<400> 16
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catcgtttgt gggatgatga tccccatttt atgtaatatt ttccaaggat agaaaagtag 120
ggaataattc tgcagctcat tgtgtggctc ataactcaaa ggttactaca acctttatct 180
ccacaccaga caaggacagt aaaggaaaac aaaacaacca catgtcatgg aaatacacat 240
ttatacactt acattatctt taaaaattta gcaag 275

<210> 17
<211> 621
<212> DNA
<213> Homo sapiens

<400> 17
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catccagcta ctgcaaaacc tttgtcatgg caacattcaa agattattca ggcatcatg 180
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cagtggtagc gatgttatcc ttcacctcac tgttttgctt ttaataggt aagtacatct 300
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tggcaatata caattggccg ttaagtcagt aaagtcagtc ctttgtatta gtgggttctg 420

catcaaattc agattgaaaa tacagtgttc atgggatgta aaacctgcat atatggaagg 480
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tttggtatcc atggggatcc tggaaccagt cccccaaggg atactggagg gacaactgta 600
taatatttta cttctgttgc a 621

<210> 18
<211> 546
<212> DNA
<213> Homo sapiens

<400> 18
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gtagtagaaa gatgttggaa ggagagcatt cctaacatag gaaatagcat ggtcaaaagt 180
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tgggtgtgcc tgtgtgtttt taatgattga atttggtcat agaaaacaga tggcaaaggc 420
aggatgaaag aggaagaact gaaagtcaag acaatgaatt aggaaactac tacaataatg 480
acaggcaggc cgaggcaaag cagtggctgt gctctaatat aaggaaaaaa gtaagagtga 540
tagtct 546

<210> 19
<211> 656
<212> DNA
<213> Homo sapiens

<400> 19
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caaatttatt tagatacata tgttgcattt accacctaatt ttctcttaaa ctttgctgtc 180
tacagaagtt attagcaggc acatctgtgt acaatatact gtaaagttct acattgacta 240
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tctattgtag acaacacaga actttatcaa aataatgctt actcattagc cctgtaaagg 360
cctcccaactg aagttatctt tatttctgaa tacagtataa gatctttaag acctatggac 420
aaaataagag atctactata tagctcacia aattgtaaaa tttatatgta tattttttat 480
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cctcatttag tttcattaat gaaaatgata tgcataagta ctgcacactt tcctctttac 600
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<210> 20
 <211> 689
 <212> DNA
 <213> Homo sapiens

<400> 20
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 ctcatcacag cagaggtgtg ctttgggcgg tggcagcacc aggtgggaca gaggacacac 180
 agaaagctct caatattcat ggccaccagg agacagagac tctgtgtgtc agagaaatag 240
 gacacagggt ccagaaacat ggccacctgc aatgtcacct ggtgatacag catgaggatt 300
 ttctccaaca ggatcacagt tacacaggag aggttgacca tatcagcagc ggccaggtta 360
 aggacatagg tcacgtaggg gctgctcctg acctggaagc agaaaagcca gcagaccaca 420
 ccattgcccc ccagcccaca gaaggccacc agcactgtca ggatgaaaac cacctgtttg 480
 cccaccaacc actgcctcc cgtatgactc atgttcactt gtcttggggg ctctgtcctg 540
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 ggctgcctgg gcacaccctg caaagacaaa ggttggtaac ttaccaggcc taggaaggag 660
 agtcagggtt gccttctgac ctgctgggc 689

<210> 21
 <211> 596
 <212> DNA
 <213> Homo sapiens

<400> 21
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 tcccaggag aagggaaaat gttttcacac tgactgctgg gcagcctggt acatagctct 120
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 ggggcccatt agcaagaggt acagaagaag gaaaggagaa cagagagaag atcatctggg 240
 gtcgaggaaa aggaaaagtg tatagcttat aagctttatt ttcccataa aatcttgcct 300
 gattgagcac ataaacatgc aggataccca gtgaaatctg aatttcagat taacaacaca 360
 tatggttttc aggataagta tgccccaggc aatatctgag acatacttag actcaagaaa 420
 aaaaaaatca gtgtctatcc agaattcaag tgtaactggg tgttctgtat tttataggca 480

atcctatccc cacatcttgc cccccgggt ataatggaaa cctcaaagg ctgagactgt 540
 ttctgccatg tccttcttgc atttccatgt gccactttgc tctgtaatgt agcaca 596

<210> 22
 <211> 514
 <212> DNA
 <213> Homo sapiens

<400> 22
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 taaaggacag gcagctttcc atttaagggt atggataata tccccctgtg aatgaaaatg 180
 tattcctgca tacagatttg taggatgggtg ttactcagt atcatacaaa gcacttgtgc 240
 aatgtgggtc aataaacatg tgcagaacac ttagcttgac aggttttatg taaatccaaa 300
 aagaaacact ggatgttctt atttcaacta aaggaaatta aagcaactgt tttatatgcc 360
 caaaacttgt gtgtaattga tagactcaca atacaaatat ttccacttgg aatcaatgta 420
 aaaattatgc aaaattgcaa taaaaacttt aaatgaatgc tacttggctt agtttacctt 480
 aggctagtgc tttaagttta attctgcact aact 514

<210> 23
 <211> 487
 <212> DNA
 <213> Homo sapiens

<400> 23
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 attagtaact ataatgccag atggatattg aatgtttgct attctttcac cattctatgt 180
 tctttatata tgaatatttt gattcagcat aaatttttca catttataac atggccgaga 240
 aaatagtttg tattaataac atagctgggtg cagattttga tttataataa aacatacata 300
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 taattatcaa tcaaatatag taaatgacaa taaatagaaa aaagtataa agtagctcac 420
 tttctgtgtt ttctttttgt ttttgttttg ctttgttttg ttttttgaga cggagttttg 480
 ctcttgt 487

<210> 24
 <211> 527
 <212> DNA
 <213> Homo sapiens

<400> 24
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 aagtctaaag gaaaatcaag gcgtcagcag atggaagccc tagatagtct agggaggaat 120
 tcttcatttt ttctttgctt ctggtggctc ccagcaatct tggattcct tggttttag 180
 ctgcatcact ccaatttttg ccttcattct tccatgaact tatttcctgt gtgtgtctct 240
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 ctgaggttct tggtagacat acattttggg gggatactat tcaactcatt acaccacaac 420
 tccccaaact agagagatag gcaaatacag agaatcacag gttacaggga gcagaagcct 480
 ctaaagtcaa tacctgatag aaacacttaa acaataattg acacatt 527

<210> 25
 <211> 695
 <212> DNA
 <213> Homo sapiens

<400> 25
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 gaaaaaataa cgtaagtagg tgccaaaatg tcatttataa ctcatcctgg taaaaaaaaa 120
 aaaagattac aagattagaa atagactttc ttaccccaat gatgagcatg taatcatata 180
 ttcaattaaa atattttattg agcatacatc cattttcctt gctagtataa attaggagca 240
 ttcacattaa aatcagagat aggttaagga tgtctgctat tcagagtaat tactattgga 300
 aaggaggagg caatattata attattttcta tatggtaga ttatatcact agaaaacgat 360
 gagaatcaac tcaaattact cagaatttat aaaagcgcaa cgaaattacc agatagaggt 420
 aaatataaaa aaaccataa cttttctgta tattgataag aatttttagag ataaaaagga 480
 acagattcca ttctttgtca tcatcatcat accacagcaa aatgcaatta aatacctatg 540
 atgaatcttt acaaggaatg cagagaattt atatggaaaa taacaaaact tcaactggcag 600
 atgtaagcta tttgaataaa cggtaataaa tgctatgttc ttagactgaa tgggtttgtt 660
 gctgttttga gatggagtct tgctctgtca tccag 695

<210> 26
 <211> 640
 <212> DNA
 <213> Homo sapiens

<400> 26
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gcttcttggg atctcattgc ccaactagtg agcatagtag ctgagaggta gtttttcaac 600
cctggccctc tcccttcaat aaatatttct tgagtgaccc 640

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<210> 27
<211> 740
<212> DNA
<213> Homo sapiens

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<400> 27
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aatagactaa gcaggggaga gacataacag ttctttatgt gggggaagga gagaaagaga 180
aaaacagagc ggggaataag acagaggaca aaaatgatac atacagaagg gattaatgta 240
atagttctct ttttctctgc attgaggtag gacacagaat tacttaggcc ctacggtttc 300
acaggaccat agagaaagca tatcatccaa tgaatgaatc cattaacagt ggaagttgta 360
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tttaagcgtg tatgtgtgta tttatatata taaatatata taaatatatt catatatata 480
aatatatatt tatataaata ttttatata aatatatttt tatataaata ttttatata 540
aatatatatt tataaatata ttttatattt tatatacata tttatatata tatataaaaa 600
tatattttata taaatatatt tataaatata taaaaatata tttatatata tatattttata 660
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ttatatataa atatgtatat 740

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<210> 28
<211> 646
<212> DNA
<213> Homo sapiens

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<400> 28
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 gagaagaatg tcctgaaatg aagttggcca gatagggcag cagtgcagatc acgcaggatc 180
 ccgaaggtta tagaaagaat ttgggattgt accataagtg caatgggaaa caaatgaatt 240
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 cataaaagct caagagctaa ctgactatga tgaaatatcg tttcacaccc actaggatac 600
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<210> 29
 <211> 398
 <212> DNA
 <213> Homo sapiens

<400> 29
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 atggtccttc cttgtgcctt caaagtgcct tcattggccc tgaggaggga tggcatcctg 180
 gccctgagct tctgtcacct gtgcatggaa acccaagtcc tcacatgcct tggcagggta 240
 tcccctggga ggcttgggtc cagtccctgct ctgggtgact cgggcacctg gctggcagct 300
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 catgctcatt caagcagcct cccattttgc attgtctt 398

<210> 30
 <211> 626
 <212> DNA
 <213> Homo sapiens

<400> 30
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 atattcatgg cattaaacaa agaacaatgg agtgcccaag tgagtttttt ggtctgtttg 180
 ccaaagtgat cacttttgtt tctaaacatc ttctctctac aaagccttct tcctctaagt 240

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tctttgatca gaatgccctg tacctgacac agtactaccc agataggctg acatgcctac   300
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tatttgttga agattctcct atctgccata gatgctttac atggattatt tcattaactc   420
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aaagatgggtg_tgtctggagt ttgttccttc agatgttcag atgggtctgg agtttcttcc   600
ttctgggtggg tttgtggtct cgctga                                     626

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<210> 31
<211> 547
<212> DNA
<213> Homo sapiens

```

```

<400> 31
tatgcacatg tgtctatcac acttttgtga gtgtttaagt agaattcatt cacatgcata   60
cacactttca ttgtaccatt ctacgtctaa caaaaaaatg ttgcattcaa ggttacaat   120
aattgaacgt aatagttggt ctgaaattgt gctcaaaagc atatagcata agagaaagaa   180
gccagtcaca aaaggccaca tattgtataa ttccatgtat atgaaatgtc cagaattgat   240
aacttcacag tgttgaaaag tagattaatg gttgcctagg gctggggggc agtgggagga   300
gtgactgcta atgagtgtgt gtgtcttttt ggggtgatgg ctgcacaact ctctacatat   360
actaaaaacc atcaaaatgt aaaacaaaac aagcaaaca actacattgc ttgcaaaat   420
caatttctga atcttcgctg aaccctccca tcaccttctc taaggggagt ttgtcccttc   480
cacaggacag cactgccttc aaggccttac caggggtggt ctcccatgcc ctcatactgc   540
tggggct                                     547

```

```

<210> 32
<211> 568
<212> DNA
<213> Homo sapiens

```

```

<400> 32
atgaaacttc ctcacggcac cagggggtcc ttatgtactg gccctaatac cagctaatac   60
tgatggcaac aaaatcatga aagtggcccc cagtgcgtg agtctccctg cacagatgca   120
gaggaagga acagtgcagg agataaatga ggccagcgtg gtattcaccg gaggccaggg   180
agcctgcgtg cgaagggtga gactcgcatt gtcttctccc ccatgtcggc tcaagtggga   240
ggccaatgaa gagaggccca ggctggataa tggcaagaag actgttcaga gctgagaggt   300

```

```

gatgtcagcc ccacagaagc tgagagaagg aaactggggt taatgttatg caatgccttg 360
agtgtgtgta tggagagcct gccgtggaag cacttggggt ttgttggtgt tgttgggttt 420
ctttctgttt ctatTTTTTTT aatgaagact tcaggagggt tcaactaagc ttgatgaaaa 480
cacgtgtgtt tggttcctgg gttctgctgc ctgctgctgc tggagtgtgg cctctgagcc 540
agcgcgcgct cgtcatcaca cctctggg 568

```

```

<210> 33
<211> 642
<212> DNA
<213> Homo sapiens

```

```

<400> 33
aaacaaaata gcacttacca tgagtctata ctocaaatat gtgttcaata caaactgtaa 60
atatcaacac aataatgatt attttttaaaa atacaaccag gaagtgagca ttccgaagtt 120
ctggggagaa gccaaagtgt gaggtatata tggcttgctg cacaatgggtg tcaactctca 180
tttttcttaa aaggggataa aagggaacct ggtcttctta taaagaaaac ccaactgactt 240
catgaaaaag tcacatctcc cttgggtata tatTTTtacct attcaaatga ctagcaagct 300
tgctattgaa aatgctgaga aatattaata caaactctct cagggttaaag atataaagtc 360
tgtgaaaata catacagcca tatgattaac acaaacagtc ctttttttta aaaaaaatgg 420
catttttatt tgttatattg ggtaacaggc agaataaaaa gaaaataaag caatgcatac 480
aaatgaggaa actgcattct gtattatata aagatttaat tttatcatga gctttggaac 540
attctatata ggaaaaaatt gttagttttt ttttcatttt tagtctctga aagaggatcc 600
tgtattaatc taaaaacct aatgcaaact tgtaccagag tt 642

```

```

<210> 34
<211> 512
<212> DNA
<213> Homo sapiens

```

```

<400> 34
acagtcctgc aaaatgcaag caccagggga tccgattcta tttattcttg tgatacatag 60
ttcagttttg gcaaactaat gttttgggaa cagtgaacaa tgaatttgct ttgtctttta 120
tgatataatc ttcaaagaca aatattagaa gcagtatgtt tagaaagaat tagaagagca 180
gtgaactcca acatccaaag tttcaaatgt cgtgactgtg tgctgcctat gctaactgtc 240
tggcatttgc aatatggatg ctttgcttaa gacaaaatgc tttcctagtc aaagccccag 300
aaaattgtct gctatcacag tattgactgc tgtctgtcag caagtatttt ttcccttgctt 360
agaaacttca tcaaaatgcc ttctcaaaaa tcagctgtca cctcccttc tattcagcta 420

```

acctcacact gtatcctcct tgggatgcac acttactaat cctcttgagc caagttagac 480
 caggtttgtg gggacgtcag ctcttgcct ct 512

<210> 35
 <211> 670
 <212> DNA
 <213> Homo sapiens

<400> 35
 ttacccttg attacaggaa gggcatgtgc taaaagcctc tttggagacc cacatggccc 60
 tcagatgagc aattgttcag attccttttc tttttctttt ccatgggaat aagctttcct 120
 ctctccaaag tacatgtttt aggctttttt attttcttgc tactcccaag gacctggtga 180
 tatttttctt taccatgcat taaacagaat ctgtgagtct tttctggaaa aaaaaaggc 240
 aggagggaac atactagtta aaaagtttct gggtagacta ccaagatgta cctatttatt 300
 gatatacaaa tggcataagt tattgaatgc ttgctatagg cattctctaa gaactttgta 360
 agaattgact tacatgagct acttcatagc agttcgatga tatacatgtt gttattatca 420
 ccactttaca gataaggaaa tagagacaga catactgaat gacatgctca acgccactcc 480
 actagcaagt ggcagaacca agcttgaaac agctgggtctg actccggagt ctgtgctctg 540
 atctatatca cagctatttc tatatgtgct attctactaa tataatattt ttgaaatata 600
 tgaaaaagta attttaatag aatgagatac atattggcaa tattgaagtt ctcatacttt 660
 ttgtcctctg 670

<210> 36
 <211> 659
 <212> DNA
 <213> Homo sapiens

<400> 36
 tctcatccca aggaaagaga ggtatttctc cagcctgagt aaaagagcac cacaaaggaa 60
 caggatctga gacctgggag gattaaatat ttcctacggg gagtcgaaaa taagattgct 120
 ataaagaggt tctcctacta caggtaggag acagccttga gactgtgctg cttccaggaa 180
 gagggaagat tcttagaaaag ggggggatcc cttgagggtc tgaagatgaa aagaaagaaa 240
 aacatgaccc ctccccacaa aatccctcaa acaagggtg atcaaagaat cagaaaaagt 300
 cacattaaag ccctatttct taaagaattg ttcttttctg tagcaacaaa agaaagagat 360
 tttgaactta gaaccaagta agccactcaa acccattcct cctatctcta tgcttatctg 420
 ttaggaaagt ccagctgaaa tagataataa taaacattaa aataacccaa catccaccca 480

```

aagttagttt aaaaagaaaa tggaaaatga gaatcaaaac attacagcag atgaaaacat 540
acacaaacaa agacatgaca caggaaaact ataacacaaa attccaatag gggcaaaaat 600
acttaaaaaa taaaatttag atattaaaga tcgacacttt ctgacaagtt caaaactca 659

```

```

<210> 37
<211> 536
<212> DNA
<213> Homo sapiens

```

```

<400> 37
atttacatat gtataacatt cccttacagt gccatatagc cccctccaaa atttaatact 60
taaacttttt gtgtttattt ttccccagtt gtatacagtc ccctgaaata acaaaagctt 120
attttaagga tttagaaata aattaaaatc ggaaaagact gtcttaaata aagacatata 180
acttaccac aaagaagtca gagatggcca agttaagaa aaaataacta ctctgatgtc 240
taagggtttt gtccaccaca aaagctaaaa tgaccaaagc atttcctagc attatagcaa 300
aagctactaa ggacataaaa aatgctaaag taacacgagt gcttagtgat aaattgattg 360
tgctattagt atctggcatc acatcaaatg atgaagaagg tcaaattagc aaattaatcc 420
agccagacaa ttctgacaag tatgttttct aatcacatac ctaaaatgtg tagtcttcca 480
ctcaaaacaa cactgggtta atctaagtgt gatctcatag tacttctga ttcttg 536

```

```

<210> 38
<211> 543
<212> DNA
<213> Homo sapiens

```

```

<400> 38
aaagtctaaa atacaggata atcatgacct cccaccatcc accaccctga aagtcatttt 60
atgtctcctt atattattga acacaatgtc tcaattcaat gtcgtacaca aagccatcca 120
taatttgaac agcatccttt ctctccattc tcccacattt aggttatgtc ctggcccacg 180
ctaccctttc ataagtctac caaactcca cattctttca catccccata gtttggatgt 240
gctatttaat ttgtcttctc caagcatttg tacttctctgc caaacacaca tactttcttc 300
tccagaataa ctcatattca ttcttgaaga cttgattcaa gttttttctc ctctgggtgc 360
cttctataaa ccttcttttc tctgtccaa tttgggaagt gctgttcctt ctatactctc 420
atcaaccata gcagcctagc ctacgtctat tatagatttg tcgtaccttg ttgtaattaa 480
ctgtatgttt attaataatg atagtaatga taattttggt atctgtaggt aattgaatat 540
aaa 543

```

<210> 39
 <211> 380
 <212> DNA
 <213> Homo sapiens

<400> 39
 tcatcgaaca agaattcctc ataaaagaga ggggatagag gcctgaaaat tttaaataaa 60
 gttcaaaccct tgtaattagt gattctaaaa tttagggtgtg taaacttgag taaagtttta 120
 gtgtcacctg ataagtgtga agtaaatgaa gaatcttggg ctgtactctc caagtgtctg 180
 ggaagttttc aaaaacccat atcctgggta aaatgcatta atgtatggct gtgtgatatc 240
 cattttaatg ttgttgacag ctttgggcag agaattctag ctttcccctc tctatatatg 300
 taccoccttt cctccacaat aattaatttt tagttgaatc aatgactgcc catccaaaaa 360
 acaaacaac aaacaaataa 380

<210> 40
 <211> 456
 <212> DNA
 <213> Homo sapiens

<400> 40
 aaaaaaaaaa aaaaaaaaaa aaagggtaat aagtggggag tagggaacac caggtgctta 60
 gtatatacta tggtcttggt tgcaaggaat ctgtcaacat ttaagcacia gtcactctatt 120
 aatactatcg tagtcacagt atgccacaaa aaaacaaata actcacaacc aacatggtgt 180
 acattaaacc agttacataa tatatacaaa catatataaa tagtgtcaga tataaactaa 240
 acattacact caaaaagagt tagaggtctc tgcagaatca tgtgctcaaa gaatctatga 300
 ctgaaagtac atgttaaatg caatgcagga tatgtaaaag tgtaattat ttaaatgtta 360
 tacatttgca tttgcagatg ttattttata ataagctact gtccttaaag aattttaaatt 420
 catctcaatg aagagcaaag aggaaatgag aaaaaa 456

<210> 41
 <211> 399
 <212> DNA
 <213> Homo sapiens

<400> 41
 ccgcctgcc ctgtggcagt gtcgatgttg tctacttccc cgtgtgcctc tattcttggg 60
 ctctgtctct gttctcaaca ccgctgtgtg ctgagcacag cagaaatcag gacattcacc 120
 attccacctg cagcctctgg ggcccccttt tgctctggcc accttaccct cctcgggcct 180
 cccaccatt gcactcacca ccccccaac tcacctgcc ctccacctgg aaggggatca 240
 gtccctgaat catatgacct gggcacgcc tccccagtc tgggatggct gctcctcctt 300

ccagggctgg tgctgggctc caccacctat gaaagcgcca ggttatctgc tgtgtccacg 360
tgtgtctctg tcagtgggtg tgggggtggg gaggtgtct 399

<210> 42
<211> 619
<212> DNA
<213> Homo sapiens

<400> 42
aataaaatgg caaacttttt ttctagtagt ttaaaggagt aaacttggtt acccaataag 60
ataactgtaa gaaaatatcc tccagtagcg aaacataaac gcagcaattg caaatgtcca 120
catatagtat agatgagtag cgtatagtat ttctctctctt agaatgtaag ctcagggtcaa 180
ccaatcccat cctctcttta tttctctccag tgcatacaaga aaaacaatgt ataaatatca 240
gatgctgaat aaatactact gacaaaagta ctttttttga aataaagaga aattctacaa 300
agagagttta tttttgagag ttttccaca caaacttctg gatcagcata ccaataaaaa 360
acagcactgc atcttggaat actcaggcaa aactgagtat atgggaatct taaagtgttt 420
cattcatctt ctgaaatagg aaataagcag acatttgttt cactgcttaa gatttcctaa 480
attttttcta aggtaatagt ttagaaagta ccactttgtt tctcccaact ttagttccc 540
ttattagacc aaccgcagga ataatttttc tactttaaaa gttttttcaa gtcaacatcc 600
ctgggatcta aaacttagt 619

<210> 43
<211> 473
<212> DNA
<213> Homo sapiens

<400> 43
ccacaactta atagtttagag tggtcagaat ataattcaaa atttcttgac atataaaaaa 60
atggaagaca tttcaatcaa aaacaaaatc aaacaagatc agtccaaga tgaaagagat 120
cttggaacta gcaggcaatg attttaaaaa cagctcctat aattattcta aagaaagtaa 180
aacaaaatat gcccgtagt agtaaagaga tataaaatct tatcagacac agaaagtaaa 240
atgaacaaaa tggcaatttt ataactgaaa tatacattat tggaactaaa agtttcagag 300
agtagactta atgacacaaa tccagaagaa agagataaca gaggaagaa taagttaaact 360
taatatcagt taataaggat tatccattat acattagagg gaaaagatgt ggtgaaaaca 420
gaacagagac tcaggaccag ttaaataatc aatggtataa cagatatata att 473

<210> 44

<211> 588
 <212> DNA
 <213> Homo sapiens

<400> 44
 cattgtatac ctatccttgc acagactgtc ttctggtctc ccatttatca tccattttca 60
 gttgtcttgg tcttagtggt tgctatctgt tgggccccgt tccacattga cggactcttc 120
 ttcagctttg tggaggagtg gagtgaatcc ctggctgctg tgttcaacct cgtccatgtg 180
 gtgtcaggta aaaccttagc tggatttggt gcatgactag tattcaggta acagcacctt 240
 ctcttcacac ttgcttagat gcctaagtac tccaatttat cacggggatc tgccatgcta 300
 taatgaagac atttgatttt tctttttatc agagattgat tatgtttgat actgtttcaa 360
 atacatatat accagatcac tattttcaag gctactttat ggaaaacctc aagtctaact 420
 gtgatgatta cagaaggaaa atggtcaagg agtgattcct ttggttatcc tccaaatggc 480
 catgcaatta aattggttct tatttagtaa acacccatgt ccctggaaat ctcatattgc 540
 ctttggaag tatttatatcc tcatgaagga aaactaaatg gtattcat 588

<210> 45
 <211> 613
 <212> DNA
 <213> Homo sapiens

<400> 45
 ctggaagtgg gcctttgggc agcttccttt atcctggcat tgcctgtctg ggtctactcg 60
 aaggatcatca aatttaaaga cgggtgttgag agttgtgctt ttgatttgac atccccctgac 120
 gatgtactct ggtaagttgt gaaaacttaa gaaaaacgag ttgaattaag ttgtgaagaa 180
 cttcattctc cttgtcaaca tgtgagcagc ctcaaagagt atccttatgg atcctcttct 240
 cgccagtatc tccattaggt ttctccacac atacaatcaa ggtgataagt ttgattttta 300
 aggagagggg aacctttaga aaaagatttt gaattcaatc atgtaacctc agtggacaca 360
 aatatattta aacatggatt ttaaaccattc atagcagcca gacgcagtgg gaatgcagca 420
 atcaaggag gtaaggaatt tccagagtca ctgactcc acctcatcag tatgcaattg 480
 cagtttgctt gaattatgtc ccctataaag acatgttcaa gtctacacc agctccccat 540
 acctgtgaat gtgatcttat ttggaaatag ggttttttca gatgtaatca agctaagtta 600
 agggcatgct gga 613

<210> 46
 <211> 728
 <212> DNA
 <213> Homo sapiens

```

<400> 46
ctccttggtt tatatatatt tctgagtcct gtttggtgac tagaatggac tctatttcag    60
agcttctgct ttttgtttct gtgtcacctt gtcattttct aaattgattg gggcaccctt    120
gggggaagtg gtctgtgaag gacaagtgtg caccaaggta ctctgtaggc agggcaggaa    180
aggagtgagc cttgggggag agcacaagtc aaacacaagc tgggttcttc ctgtcctcac    240
cttcctggag aaatcaggac actttgctgc gggaaagcat gacctgtttt aaccctttgt    300
ggtgggggtg ttttggtgca atactgctgt gggaaggcac caccctttct tgttttccac    360
ataggactca tatattcata ttttttatac ttattctgcc ctctaattct tttctgcagc    420
catctcattc attttcatcc caactacat tccgttttgt acacttatag ctatattatt    480
gcctctttat ctcaacaagt gtggtatgat aaataagtga tgtttgtaca ctgtttttgc    540
aaaaaagctc acagtgcctt ctgggggtat ctactaatta atctttacag aatccctatg    600
agatagatag ggctggatag ggtattcagc acacaattca ctagaccatg ctgtctctct    660
attatgataa aggattatta ttatgttaaa atgtttatac actgaataca taaatttgta    720
gagattga                                         726

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<210> 47
<211> 578
<212> DNA
<213> Homo sapiens

```

```

<400> 47
cctcttttaa attatcagtg ttcacagtat cttccaaaag acatgtaa at gtataaaggt    60
ataaaaaata tacatataaa ttttacaatt ttgtgagcta tatagtagat ctcttatttt    120
gtccatagggt cttaaagatc ttatactgta ttcaggaata aagataactt cagtgggagg    180
cctttacagg gctaattgagt aagcattatt ttgataaagt tctgtgttgt ctacaataga    240
tatagtagaa atactcttgg aatggtaatc atcccaggcc ctgctttgga gcggaagaaa    300
tagtcaatgt agaactttac agtatattgt acacagatgt gcctgcta at aacttctgta    360
gacagcaaag ttttaagagaa attaggtggt aaatgcaaca tatgtatcta aataaatttg    420
gtctgaggga tttgataaga tgaaacagta catagtccag aaaattttta tactcaaaga    480
attatagaaa atatctgaaa tgttttcagt tttgtgcata tccagaaa at gtcacctgt    540
gatctgctgg ttggcagccc agtggcagta ttagatgt                                         578

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```

<210> 48
<211> 469
<212> DNA

```

<213> Homo sapiens

<400> 48

| | |
|--|-----|
| taaaaataat acaataaaat gcttgccaga taattctaac atctctgcc | 60 |
| tggtggtgtt tttggtctat tgattgcttt ttctcattta agttgattct | 120 |
| tagcataatg agtgatttct aattacataa tactttgggt attatgttct | 180 |
| aaaactctgg atcttattta aatcctttgt tttatgtgga | 240 |
| cttttctgat actactctaa taggagtggtt ggtgggggtc | 300 |
| actgtgtcat gactgccacg taggggggtg aagtacagtt tccccacttg | 360 |
| acctgtattg atcctggagt gggagtgatc ctactacaa | 420 |
| ctcggtggtg taggagctac tgccccttgt tgggtcccca | 469 |
| catataccac cctggctggg agtggcagga gtgctttgtc | |
| attgtgcccc atgtggcctc cgctcacact | |
| gtggggagga gtatccttgc tgcccctgag | |
| tggtggtga | |

<210> 49

<211> 637

<212> DNA

<213> Homo sapiens

<400> 49

| | |
|--|-----|
| aggatcagct tggacatgcc cattacaaag caaataagta | 60 |
| catgacatgt cataaagcct catgaaattg gtcacatgcc | 120 |
| aagcacttct ccagtagctc acagacctgg ctaactgcat | 180 |
| acaaagaaag ggccagggcc cacctcacca tggcagaggt | 240 |
| gtgctctggg cgggtggcagc accaggtggg acagagggca | 300 |
| cagagaaagc tctcaatact catggccacc aggagacaga | 360 |
| gacccactgt gtcggagaaa taggagacag gatccagaaa | 420 |
| cacagccacc tgcaatgccg cctgggtgata cagcatgagg | 480 |
| atcttctcca gcaggatcac agttacacag gagagggtga | 540 |
| ccatatcaac agtggccagg ttaaggatgt aggtcacata | 600 |
| ggggctgctc cagacctgtg agtagagaag ccagcagatc | 637 |
| acatcattgc ctaccagtcc acagagggcc accagcactg | |
| tcaggagaaa gaccacctgc ctgtccacca accactcacc | |
| tcccgtagtg ctcatgttca catgtcttga ggtctcagtc | |
| tcattgtccc aatccagctt tccagagagg gttgcgagaa | |
| gctaggctat ggtgggctac cttttgctgc ctgcgca | |

<210> 50

<211> 638

<212> DNA

<213> Homo sapiens

<400> 50

| | |
|---|-----|
| catttgaaat atttcttttt ttaaaaattg ataaaataat | 60 |
| gtaatagtat accattttga taatatataa | 120 |
| tttatattaa atttcaacaa aaaagcctgt | |
| ttgtaactaa tatttttaat | |

```

taattatttg gtcttttaaat atctgtcata tttaaaaact gatattctaat ccatctaaac      180
aaaatccact tcaaattcaa aataacctgg aagaaaagca aacaaaataa ccaactttta      240
gttgtaaaga tgataactat tatcagggat gtgcctgtgt ctgcttctat ttactgtcac      300
attttaggca ttcttttcta cttgacagtt cacttctgag tgactaggaa tgaagcttat      360
tttagcctac tttttcccat ttgtttttgt aaaagaagaa acacagagta ttcttgaaaa      420
tccagtgtgg aacattttga tgtttaccat cagcaatatt atgaaatatg tcacatatca      480
tctacatctt ttggtaatt atttatgtac ctttcatitt gacactcaaa aatggccact      540
tttttttctg tgtatgaaac ccatctatta catccgattt tattctattt caaaactatt      600
ccaatcatca ttcattggac aaacagattc tcaatatt                                638

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```

<210> 51
<211> 311
<212> DNA
<213> Homo sapiens

```

```

<400> 51
gcaaaatggt aaggctatth atcacagcac tatctataat agcaaagtct aaaaggataa      60
aaatgtccat ccagtgttgg aagctgaata atctgtttta catttacaca atgaagaata      120
tacactgctt tggaagtgat caccaggata aatgaacaaa acaaggtaga aaaggatata      180
tgtaataata tataatcctt taaggaatgg ggaggggcaa atgtaattat atttgcttat      240
attttttaaaa tggaaagttt aacctaaaac taataaaaat gactttacta gtttaactga      300
ctcaaccatt g                                                                311

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```

<210> 52
<211> 570
<212> DNA
<213> Homo sapiens

```

```

<400> 52
ctcctgggcc cggaagacgg aagactcggg ggcgccctaat aaggagtaga ggagtcgggt      60
taccagggtgt gggatgagag aactgccccg acgccccctt tccccacccc aggcaaggaa      120
gtccagctgg ttgggctggc ttagcctctc cctcccgtga aatggaaaac tctctctatg      180
cggagttctg gggactgact tgcctagaga cccctcctgg ccagactag tccccactcc      240
cctectactg agcttctgag cgtccgacga ggcacagtcc ctcccgtcgt gcagcgggaa      300
aacggactcc cegagaggtt gaggaatttg ctgagagtta cacagtgggg aagacgcaa      360
gccaggattt taacgcaagt tgtccagact ccaagggcc a gattctcctc tgacattaac      420
gccgtgcccc aggaccatgg actgctttcc ctaacacca gacagaaaac tgcgatgcct      480

```

tggttatgat tgaaagaccc agatagggat ccccttccc aagtgggttg ggcgga-gcg 540
 gccgctgtcc ccgcgggcgg tgagcgacgc 570

<210> 53
 <211> 600
 <212> DNA
 <213> Homo sapiens

<400> 53
 gccatcccca ggaagctttt agaggacaaa aacttagttt ctgcattcat tgctctgtgt 60
 aattaaaatt gggagtaatc cccctacaca cagtatgaag ggaatacag tagtgaaaaa 120
 cctcaaattt ttctctgtaa attgaagtaa ttgacctggg tggcatctaa atttcgaacg 180
 ctcaaaaagg tgagttgacc ttgctgtcta tcaattaccc actgtactct cagatccttg 240
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 gactgagcac tcaggctagt gtagaatgtg gcagagcatc agatcactgc tctgaagacc 360
 atccctgtca tagctctggg gttctttttt ggaagtggaa ccagagtcac tttccaggct 420
 gggatgatga acttgtgagt taactggata cctcagaaca gtggaggcaa acaaggaagc 480
 acaggaggct tctgaggctt cttacattgc cctggagcct gtaggcctca ctcatctgcc 540
 ctcttgtatc atagttttatt tgtttggttaa attattttta cgtttggatt taaaattttt 600

<210> 54
 <211> 720
 <212> DNA
 <213> Homo sapiens

<400> 54
 aatagtcag actaaaaatt tgattaattt ccaaggtaag aaatatacag ttaattcctg 60
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 atttctgtag ttaaagtgat taagaagaaa tgaggtaaat gagaacaaac tttatgaatc 180
 aggagaaaaa taatcatttg taaaaaaaaa tcctcaaag cagtcactct atgctaaact 240
 ctgctcatat ttttttcaat aaacaagcaa tattatatgc aaattattat gtagttaaca 300
 tttttggaaa ttttaattata atgaaaagag tttggagttt ttttgaaaga cataaattga 360
 gtctttattc agataccaac tacatgattg taggcatgac atatgttcta gatcacggat 420
 tttcatctgt aaattgggga agctaatttc tttttaagat tatgtcccag tacattattg 480
 catattgtat atactttgca ttattgccta attccttgtg cctgagttta ttgtataaat 540
 tactgagggc caaatgaag ttgtaaacca acattgaaaa aagaagcaca ctaaatcaa 600

atagtaagct gaaaaataac tagtttaaat ttcattccaga tgtatctgct catatgtcat 660
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<210> 55
 <211> 619
 <212> DNA
 <213> Homo sapiens

<400> 55
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 cagctgtttc ccatttgagg taaaggggta tacaacaat actgctatga aactcttca 180
 gcatgactgc aaatattcat gaccaagaat ttctcccaag cagtgttttt caaactgcag 240
 actgcaatct agtaatgggt cattaaatcg atttagttac aataagtggc atttttttaa 300
 acggattata atacaataga aaatatcaag gtaataggca cacattctta gcaatgaaac 360
 tacagttaaa ggaataaact tataaaacag acatgcttca taaattatgt tctaaatttt 420
 tatcatgttt aagattttta ttgtatttaa atattagtaa attcacattt gatataaaca 480
 ttttcatata ttaccttaa ttatatgtag taaaaataac ttatacgaaa ctacttcat 540
 gtgtgtataa tgggtcatga agtaaaatgt acttcagcgt gggggatcat actaacaaaa 600
 gtttgaagaa cacttctct 619

<210> 56
 <211> 659
 <212> DNA
 <213> Homo sapiens

<400> 56
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 aacttactga gtgtcagggt ctgtggtaac acattatgtg cattacgttt gtaaatccca 120
 acaatgaatt aagcagcctt atgattctca tctcacagaa tctagaggta agtaacttgc 180
 ccaagttaca ctgctggtaa gaagccctac ttcattcaaca acaactacac ttgaaacaat 240
 agcaaaattg aagtgtgaca gtaaaactgaa tgcaatatac attacagtat aatttatttt 300
 attacttaca catttcagca aagtgcgaagt tttctggagt atttatcttg ttcccataga 360
 tgttgtacag ggaattcaat aataagaata gtagccagaa aagaaaaagg cagaaaactt 420
 aacagttata agaaaatgaa aaatttttagt acttttttct attcccatgc tatatatcat 480
 aatatagagg aaattaaaga aaaatatgtt tgattacata acttttataa ataataattc 540
 tgtaggtgtg aatatgtgtg tgtaaacctg tatgagtgat taatatgtca ttagaagaaa 600

ggatgttacc cactctaaaa taatgttaga tgacatttat gcactaataa tatgaacca 659

<210> 57
 <211> 640
 <212> DNA
 <213> Homo sapiens

<400> 57
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 aattggtggg ggagagctag tttatatattc atggccagca aaggcttctt tgagcagagg 180
 aattttttatc tgagtccaaa cagggggggc acaaccatgc aaagatgggc attcaaaata 240
 gagaaattag caaacacaaa agccaagggg ctgtcctaag aaggaaaggg aagttggggg 300
 gaagaaaaga gaatcaaaag tgtgcaggca ggacctcatg gtccagaaga agtctgaatt 360
 tcattctcaa gagactcgga ggctctata gaatttgagc atggctgtgt agcatttttt 420
 tcttttttct ttttaattttt aatttttttt atttgaatac agacatcatt tcaagagact 480
 gaatagcatt ttctaaaggc tactctgacc actggttgtg gaatgactgt gaagggtgt 540
 ggggaagggg gaatgggtgc tcccacacct tcacactcag cctgtttggc atttgctttc 600
 attttgctca agtgccacag ggcttagatt agagtgatct 640

<210> 58
 <211> 637
 <212> DNA
 <213> Homo sapiens

<400> 58
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 cccaagaaa atgtgctaca catgtgaaaa tgagtacagg ttgagcatcc caaatccaaa 180
 aatccaaaaa tacaaaatct gaaatgctcc aaaatccaaa agtctttgag tgtcaatgtg 240
 atactcatag gatatgctca atggagcatt ttggatttca gatttccaga tttgggatac 300
 tcgataagtg taatgtaaat attoccaaatt caaaacatat ctgaaacctg aaacacttct 360
 attcccaagc atttcagata aggaatactc aacctgtaat ttaaatacaat gccagaagaa 420
 ctattagggg aaaataaaat ttaataacca aagttagatt ttacagcttt aatggcaact 480
 ttagaacatt ttaatagcac aaaagaataa aacagacttt ataatatcat agcaagtaga 540
 aagcaaaata gtaactttat tctatgaatt aaaaagtcac agtatgacat agttcttagg 600

tttacagcca ctatacaagg gacaaagcca gagccaa 637

<210> 59
 <211> 640
 <212> DNA
 <213> Homo sapiens

<400> 59
 aatggataat gaaactgagg catatccaca tacaaattat tcggccttaa aaaaaagaa 60
 tttctgccat ttgtaacaac actgaagaac ttggaggaca ttatgtggaa tgaaacaaac 120
 cagatacaca caaaaaacac tgcaggatct cacctgtaag ttaaattctaa agttgagttc 180
 atagatgcag agagtagaat ggcagttatc agggatggga aaatggggag atgctggtca 240
 aaggatagaa agcttcagct gtgcaggatg aatacattct acaaattctg ggtacagcgg 300
 tggcctacag ttaacaatgc tgtactgtat atgtaataatt ccctaaggga gtagatctta 360
 agtgctttgt cacaaaaaaa gaagaggtaa ctgtgtgaag agagggatgt gttagtcagc 420
 taattcacat atagtcacgc tagatgataa caatcagctc actatatata tcaaaacgtc 480
 acaccacata ccttcagtac gcaattgtaa tttcaaaaaa ttatggcaaa cattgtaaga 540
 gtttagtcaa attataaaat aattacatat ctactctgtg accagactgt gtttgatagg 600
 gagatgatgt ttctaaaatg gaaagctatc tagtcacata 640

<210> 60
 <211> 486
 <212> DNA
 <213> Homo sapiens

<400> 60
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 atcttatctt gtgtggtatc cctgtatcta ggatgcggtg ctggtactga acaggtgcac 120
 agtcagtagt taaggaacaa ttgaatgatg actgctgttc tgggcttatg agctttttcc 180
 tgtgccttat tgtcatccaa ttttgctat ttataagatg tcaatttttt tttaaatgta 240
 aggggttgat gagctgttat ttggttttat tgaggggtgt tttgggacat ttatctcagc 300
 aaaccatggc cacgcctcca tataatgtcc aagagaaaga gcctctaaat gcaatgtgtt 360
 ggatgttagc taagtgaaat caccacaaga agctcatgac tcaaatcaca gaggctcaca 420
 aggccttagt agaacgggca cctctgggct tgctgtggg ttttcttggt atgtctgtat 480
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<210> 61
 <211> 607

<212> DNA

<213> Homo sapiens

<400> 61

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agctctgtcc agagggctca ctaaaaaac ttgggtttct attaaactag tttcagacca      60
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tatgaagcta tcgggaggtt cgcttcaggg tttgttttcc tttaacatth gctttaattc      180
aaaccataaa ggaaaatatt ataccgtagc aagacttagc aatacttttag ataaacaggg      240
cctaaacaga tatagataat atagataatt atttttctca aatataatatt tcatattata      300
tataatttta tagaactgta tcaaaatgat tacataagta ttatatataa aaaaactatt      360
tttcccaaaa tgacaataag cattaccaca gcgcaaaatc tgtgccacag gaaaaactat      420
cagaaagacc cctttacctt cccttaacca ttaatacaga acaaacacaa caccagcgag      480
tccctgcttg tgtggagtg ctcctaagag aaataagtat tagtaagaca gctgtttctg      540
gataatgggc tcctgtgtct gtgaaaactg ctacaaacca aacagtttag attttttgac      600
ctgacct                                          607

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<210> 62

<211> 546

<212> DNA

<213> Homo sapiens

<400> 62

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aaaagcaaaa tcttgagtca gttgaagcca tgatatttta ttccttcatg accttgagat      60
agcagtgcata aaaccatggg ttgtacctat catatttttt tctttattca atgatattat      120
tatactgggt aatatttggg agtcaagaga gcatggccct ggtttggaac ttccatggat      180
gagtacataa gaatgatttt aatcagcata taattatata gaatcatata tatataggat      240
ctagatatag atctacttgc tgacttgccc attcacacat ctctgtgtcc catcagtcct      300
caacagaaaag aggatagcag atattccaga agaagggact ggaaaacat ctagagcaag      360
ttgcatcttt gatttacaac ctaggaaaca gaattgggga gccgatcaaa ggatcttgct      420
cctttgcccc agaaaacaaa actgggacac cagcaatgac tgttaaatag taccataggt      480
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ttggga                                          546

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<210> 63

<211> 550

<212> DNA

<213> Homo sapiens

<400> 63
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 agaatccttt accgactggc ttctagtcaa atttggccaa tgagagttac tggtagagagg 120
 aaagacgccca ttctgatctg gcaccagtgg tggaggtgtc tcagtggcca attcggcact 180
 ggccacatag ggctctttct gtgaaggtag agaatgggca ctggccacac cgtaacctcc 240
 agcagcaaat gcagctagag ggctccagcc taagagtggg agcagctctc tcatctctgg 300
 gcagccttcg ttcttttctc cccagcctt tccaatgcct ttgcaaccgt ttcccagaat 360
 taaatccctt tgtgtttgaa tgatgtacag tgttttttgt tttctgatt gggactgact 420
 ggctgattat agaccaaagt attcagaagc tttgggaaac caaggggttt ataagtcaaa 480
 atagtgtaat gcttttctgg aaaccagtct tccctccaaa ctgttatcag gcaaatttta 540
 tgcagttctt 550

<210> 64
 <211> 598
 <212> DNA
 <213> Homo sapiens

<400> 64
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 aggcttgact catatgagtt tttcccaatg acacctttga taattatttg ataaaaataa 120
 tactgtttta aaaaaaaaaac ctgcgtttta ttcttaacca tagttcagtt ttactctgag 180
 atatgataat gaagcctatc aaagaatggt ctccgggagt tagttccgtg agctctgggt 240
 tccctgtgga aggccacctg tgtgctgctg ctgtgggaga atgtagggct tgagtcactc 300
 ctttccctc aagctgocat ccatttctca ccaacttttg accacctccc agaagtgagc 360
 tacagtcatg caatgttttg gtcaaagact aaccacttat acaatgggtg tcccatgaga 420
 ttataatact atatttttac tgggttcttt ccatgtttat atatttagat acacagatac 480
 ttaccattgt gttacaattg cctacaatat ccagcagtaa catgctgaat aggtttgtag 540
 cctaggagcc ataggctatt ccctatagca tagatgtgca gtaggctcta ccatcatg 598

<210> 65
 <211> 716
 <212> DNA
 <213> Homo sapiens

<400> 65
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 ccttccacag atacttactg cacactcatt ccaagtctag gtactcaggg tacatcagtg 120

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aacaaaaccc atacattagt ccggttccac tgagaagaag atgccatgat aggatgacgt 180
ttcctggaga aagagcaagg aaagacaagg agagcctcac actgtgatgc aggtctgatg 240
cctgcagaag gagacaggga agggaggagg ctgggagtag aacagccttg ggctgaagtg 300
caattccagg aatgctcttg cccaccagc ggggaattct tgaaccaaag tcaccataa 360
gagagtcttg ctttttgcca aatggatccg tgtaaatgac cttgctgtgc tcagctgctg 420
gctggaaaca gcccgaggga agtgtgaact caatatgaat gtgatggtgg gtccaaggg 480
gtgagctgag acggtgagtc cattgtgctt ctacagcag agatctgagc cttgcagttt 540
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agaaatgaat gaataaatag ataaaggat gatagaagcc tgtaagtatt atgcaaaacc 660
cgaggtggca cggagaagga ttgggagtg caggatgggg agggctgcaa ctgagg 716

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<210> 66
 <211> 408
 <212> DNA
 <213> Homo sapiens

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<400> 66
cctggtttta tgggtataaat ttataatcat aaaaatattt ttaataaaag attataaacc 60
ttctcctaata ggccaactat ttttgaattt ctgccttaat attttgatga tacttttatt 120
tcttcctcaa gacacattac catgtctatc atgtctcctt tcacagtgc gcaccatcat 180
atttcatta acatgtggct ctggacatac aatagatcca actgcacccc ttaaaacaca 240
gcggaatgt ggtagagaaa actgacttaa catagtaaaa actatagcct gagctctgct 300
caccaagctg agtattacag agacattatc ctgtttccat ttgatagagt taaagtgatc 360
tcaatcagag agcaagatct aagcttaatg ggtaaaaatt cagagttg 408

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<210> 67
 <211> 576
 <212> DNA
 <213> Homo sapiens

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<400> 67
ttctgaaact aagcaaaaat gagccttaaa ttgttcagtt ggtgagatag agcagagact 60
ttggatgatg tagaacatga agatgtatgt atatattcat ttttggaggg ggttacattc 120
ctctctggct actatatact cctagacaaa aaaatacagt catcaatcac tgattcagtt 180
aaatatctgc ttggcaacgc gtttcacaga taggctatta gaagaaacaa gcaaatgttt 240
actgagtaca tactgtgttc cagacacagt gttaggaact ggtggataaa acataaggag 300
aaggacaaag actgtccagt ggcagctaca gtcaatggca gggagtatga tcaagtaatt 360

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ggctaattggc atcactgggt accacagcag tataggggag gaatattcca aactggggag 420
 ggatggggag tttgggtcagg gaagatttac catagaaaat gctaagatga aacctgaaag 480
 gctagaagca gttagccaga ttcaagggtg gggagaagac ttttttaggc agatgacacc 540
 gcatccatgg aagcaagggg tggaggggaaac cagaag 576

<210> 68
 <211> 613
 <212> DNA
 <213> Homo sapiens

<400> 68
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 caaacattca tcccatccct cctcccacca gtggccaacc acagggcatc tctggtttac 120
 atgacctacg gcaactcgag gccattcaca gtaaaggcca ctccagatag tgatgatgac 180
 actcacttgc agaggcagga ggggtcccgcc acacccccct ccaaaggggc acacacacag 240
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 tcataatgct ctccccaaat cagtaccaca cagaccccc tcttctgttt gctcagaccc 600
 ccgtctctcca gca 613

<210> 69
 <211> 607
 <212> DNA
 <213> Homo sapiens

<400> 69
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 aggctgagca gagccatata aacctaggga gaagcccgtg cttgaagcct catgttgtgt 120
 ctgtcaagga agtttcaagg ctaggaccag cctccacggg gcagagaagt cgtgctttct 180
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 cctggttccg agcctgctgc agctccgcgg gccgccccct ccctgttcac ccagggggagc 420

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aggcgtgttc cctccgcagg ggcttgagac ctgccgtcct ttcccctgga cctccctct 480
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gggccctgct gagcagcaga gaatttctta gaattttcat cgccagatgg ctctgggtta 600
gggctga 607

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<210> 70
<211> 596
<212> DNA
<213> Homo sapiens

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<400> 70
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ggagaatgat tggcagggtg cctatgttag atgaggaaga gtcagagata tagcctttct 120
gaaaaagtga cacttaagat gacaaaagaa gaaataagaa aagccacaag cccagcgtct 180
caggaacagg attcagcaag tctgaagccc caacgcagaa aagtgtaatg cgtcttctag 240
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ggaaagggtg agatagatga ggcagaaatg agaagacca gcacacagag gaacagcctg 420
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gaaacagaaa gtacaaccag acaaatgcc aagacaagaga ctgcttctag aatgtaggag 540
cagccatcag ctgaattcag ctagtaggct gtggaagggtg gtacaggcac aaacct 596

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<210> 71
<211> 711
<212> DNA
<213> Homo sapiens

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<400> 71
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ccctccatct cgaagtgcct gcctggccca ccttgtggte ctcacttgga gcatgcagt 180
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agagtcaagt ccggagttca gttcagtcac caggcagtg agccacaagg tggggcagtt 420
ttcccagggtg tctcatagt gctgacttga gccagtgacc tctaaagata gagcagagtc 480
caaggaatga cctacaaaga gtgaagggga caggcaagag ctgatagctt tggaccaaga 540

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ccacgttccc tgttctgggt ccatgatgct cccttcccc tgtagagggc aggtgaggac      600
catgtggatc tttttgaaa tacatgtgga tgtttgcaa tgcagaaccg actggtggaa      660
agggcgaaca tgaacagatg atgggaagtc tggccctcat gggaccatat g              711

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<210> 72
<211> 583
<212> DNA
<213> Homo sapiens

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<400> 72
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aacattcttt ggggtgttaac cttggctctt gacacttgac aacttcctac agaatgtcat      180
ccatgtagaa ggtgattgag ttaattagtt gcaaaaagaa gggaaaatta aattaagcag      240
agttgaaata ttaatcaaag gtatactaaa aagttgggtat gttagtgtta tccactctat      300
atagatatgt tcaggtgatg ttttttcata taccattgac tttttttgtg tttgtttact      360
ctgccatgtt ccaggatgcc aggatgcaat attctttcag gcttcttgat aacactagtt      420
ctaattattc agtaattctaa aaaattatcc atagtagaag catatatgct ttatttgggg      480
ttgaagggtt ggacatatat gctttttctg tggataatta tatttatttt gggtagattg      540
gaaagtattt aacacaaatt tagtggtatt agtactagca agt                      583

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<210> 73
<211> 323
<212> DNA
<213> Homo sapiens

```

```

<400> 73
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tatatgcttt cttttaaaagg tattgttcaa gtgaaaacct tcattttaaa atataaaatg      120
agtggctcat taagacccta gaggttcttt taagaataca agaggatctc tcattttcat      180
ttcctagaat ttcacacaca atacacatgc acagtacaca cgtgcctgtg cgtgcatgca      240
cacatacacc cccacctct gctaataaag caaggccctt tctcactaac ataaggcaat      300
gataaaatca atattcatat tct                      323

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```

<210> 74
<211> 536
<212> DNA
<213> Homo sapiens

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<400> 74
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 ctgtcaatat ggccaaacag ctagataagt gcggggcagg acaaagggct ctttgcacag 120
 caggagggca atgttggtgg gggaggggca ggaggtagga aaggcaagag gaggaggttc 180
 ttttccctgg gagattatc agtttggtcat acaattaaag aaatcatttt tagttcccac 240
 tcaagcattg aatttttgcc aaccacatac tattaacccc aaatttgata catttcagaa 300
 tatcttgtag ggatccattc tcgccaaagga aaaataaaaa aataaataaa gctctgtata 360
 ggttaaaata aaataaatcc cacactctgc accctcctag gtgcaagtca cctcccagg 420
 agaccggttc tagagctgaa ttctcattaa gaaatggaaa agaatactct atctgaataa 480
 aaacacattg taatacaatg tgtttatttg ggttgggatt ggacctgaac atgtag 536

<210> 75
 <211> 674
 <212> DNA
 <213> Homo sapiens

<400> 75
 tccctgggtgc caaaagggtg cagactgctg ttgtagatga tgaagagaca cagccaagtt 60
 aagtgacttg cccaagaact gtacagctag gaagttccag agcctgccct cttagctgct 120
 tcaactaagc ttctgctat gctagagtac catgctaaca gcaggactac agacacacat 180
 gaaacaaaaa gaatgtaaaa tgtcacatct gttccaataa tgtgaaatgc caggagctga 240
 gagactgcta tgaagggcaa gtctcatggg acattttttc caatgacttt tgtggctggt 300
 gaactgtggt cctgcggatg tgccataaaa aaggaaagca ttgttttctt cccgcagatc 360
 atctttaagt tctcagagtt accatttgac ttgacaccat ttatacatgc catgaaatca 420
 tttcattact tgctgctagt actttttgga gtaataacat gtataaattt ggtcataact 480
 agagatacat caaaatctat ctggcttcca tttcatctct tgaaatacca gaagacaaa 540
 tgcttacttc ctggtacttt tgtataaaaa acaattacaa aattgtgaag gttactatca 600
 tttttcatca gcaccataaa atcagtaaca aagataagac attattcaga tctactataa 660
 aaaactacat tgga 674

<210> 76
 <211> 523
 <212> DNA
 <213> Homo sapiens

<400> 76
 aaacattttc aagcccctat ctagttaggg ctatcaatta aaagtattta tagggaatgt 60


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gtactaatat atgtctaaat ttccttaggc tgccttaagg accataggcc aggtaatctg 120
tcccctcatc cttgtcacta ggatcagagt tctgttacia atatggaagg agaagttaga 180
tcactgtctg ctctattatt atcatccaaa tgtctacaga tgaggaaact gagggccaga 240
gtgggtctaaa ccaaggggcat atgggttaata ggaggtagag ctgagccttg aagtcaggtc 300
tgcttgtcct aaagcctgta ctttagccac tatattatcc tattgcatgc tctataccac 360
ctttctctgt ctctgtctct gtatttctat ctgtctctct caagaagtat ttttttgct 420
aataattaaa taatgtggat tttttgttgt tgtcattctt cttaaagaac tgtcttgctg 480
ggttcagtta gctctaaccg tggcttctct actccgagag cct 523

```

<210> 77
 <211> 661
 <212> DNA
 <213> Homo sapiens

```

<400> 77
tttgttgtaa agatataaaa cagtaaaatc ccattgctta aatgggattt tatatgtata 60
taaattggagg aaaagtaacc acgatacaca caaaaatatg aataaagtga tttgagccta 120
ggtagtagaa atatggattt tcttttttgt attttatatg tttcctaaat gttctataaa 180
aaacaaatct tacatcttacg taagaaaaat aagaaataaa aattattcac aattgagact 240
tttggtgttc aaaatacttg aacattacta agaatgggta ctatgcagaa acaatttgct 300
attagcagat tacctatgct cctttggagt gatttctctg tgacttttca cactatttca 360
caattctgtc ctaggcttta tcaaaatcca tggacatctg atcgaaacaa aaattaacag 420
caatctgcaa aagagctatt agggacatta ctcttgtaa tagatagtca gcactctggg 480
gacagacact gtgttatctt tctcatctta aatttcaact ctgggcttaa cgggtgcttg 540
tgectaccag tgttcaatca ttggattcaa tgttgaatga ctgttaaact ccttgatgtc 600
agagctaatt gctgacaaca ccctacaggg tttgctatga gatgtatata aattgcaatc 660
t 661

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<210> 78
 <211> 722
 <212> DNA
 <213> Homo sapiens

```

<400> 78
actctttctg tccatctgga gctggcgagc agctggataa aatcagggga gttgatatac 60
ttcgttctct aagtagctca ccacctaac actccagccc agccaggagc tgtttccctg 120
gatgtacgct ggtctgtgtc atctcatctt ctccattatt cttcagcctt ctggetgggg 180

```

gcttggaatt ttcacctcct atgaaacaag tgtctgagaa ttcatgagaa gagactgcc 240
 cactagggca gagcaccttc aatagtcaga gactgaaatt aaccataacc agacagcctg 300
 catgcctgca gtcaaattat tcatattata gaggaacac aacagcaatt ttgtgactga 360
 aaaagattgc ttagatcacg ccttggcaaa accataaaca agaattagga acaaacaaaa 420
 aacaaaacaa aacaaacaca gtgcgcttta tagccctcag gatgttcagc tgggtggtggc 480
 tcacatctgg actgtatgcc accaagaaac attgaaatga gtctttgcta gaggtctctt 540
 ctgagagcca aaagatgaac tagtaacttc ggaaatgtgc aaatgtgtat ctaatgtgag 600
 cattctaaag cttgtctgag gaaaagtact taaattggat acctatgttg tccaaggggt 660
 ttataatata cagttgactc ctgaataatg tgaagataat ggggtgcagat ctgccacaca 720
 gg 722

<210> 79
 <211> 776
 <212> DNA
 <213> Homo sapiens

<400> 79
 atgatgctta ttaatcattt gtataacttc ttgggagaaa tgtctaacac tttaccatt 60
 ttaatgggtt atttggtata ttgtcattga attgtgatac ttatgtaatc tggatacaag 120
 ttccttatca gatatgtggg ttgataacat tttatttcat tgtgtggatt cttttaactt 180
 cctgatgtta ttattcatac cacaatgttt cactttgaat gaagttcaat ttatcttttt 240
 ttttccctt gggtgcttgt acttctggta ttaaactctaa aaagtcaatc ataaagacta 300
 actcctaagt cttctaagag tgttatagtt ttatcttctt acatttgggt tcaattttat 360
 tgttttgctca atttaacacg tataagccaa tacattaatt ctaagccaat gaatacatgt 420
 tcattagaga aaaatcagaa aatatgtaca tgaaaaaaaa taaaacaaaa tacattcata 480
 attctattta ttcaaaaaca actacttcta gcctgctggg ttatgcttcc aaaccctatt 540
 ttctgtgaat gtattctaatt ttttgtgtat atatgtatag gtatgcatgt atacatttta 600
 gtgggattac ataatgcaca tagttgtgta gacaggtttt tttctttgat atattgtaaa 660
 catatttgca gatcagtttt ttggacttgg cttttctgaa cttcaagtgt ttcagctgca 720
 taagagcaag tacttgtgga caatcaaatg aaataatgtt ataaatgcac tttgta 776

<210> 80
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 80
 ctgtgggtctt tgttttgtcc atctttcctt cttaggaaat taaaataaat acttgtccac 60
 attgaccgta tctgcttcac tatggccctt agacataact ttttatttga tgagtacaga 120
 aattaggtct tcctctaact tttctgtgtt gttattcaaa tttattatct tctaaattca 180
 tatctatgct attccccctt tctatcctac agcatttgca tattctgctc ttgctcttc 240
 tcaacacaaa agtacatagt gatttctttc tcattctatc tgtgctctgt ttctgattag 300
 ctctttgagt agggcccttt ctgactatca atattttttc aatatcttct cactatttac 360
 atttattaaa tctcacatta tattccactg ccatttgata ttttcttgag ttgttaataa 420
 gtagaacctt ttgatatta tatattttta atacagtgt ttttcaaga gcatggaaga 480
 aaaaagtaag cttaattcaa gttgttaata ttcaatcacc caacaaatgt ttattaagca 540
 ctgattacat acccagcact cctgtaggat ctagacatgt gagaaatgaa taagcaatca 600
 aaatctctac actcacagag atcaaattct agtcaggaga aa 642

<210> 81
 <211> 657
 <212> DNA
 <213> Homo sapiens

<400> 81
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 ttgatacatt ttgctttatt tcaggactaa tgtaatgcta cagaaaagga atgactctaa 120
 actcgcttaa tttctcctga ctataaatag cccttgacca ctttcaactt tcccactgat 180
 aactctataa catagggcaa gttacttgac ctactgagc ctattttgcc atctataaat 240
 cagctaatag gacctaaact atagggttgc tgagaggtat aagtaagaca atagagtcta 300
 gcatatggtg gggctcaaca aatattagta cattacttac actttttttt tcaccctgct 360
 atgcctttca gtttatttct actaaactct aagttattaa aatacaggct gaagtattat 420
 taatttcctt ctgtgttctc ccgggttcct atcacagtgc caggacaca caggcccat 480
 aatccttcat ggtcaattga actgacagtg aactatgtct tcgtccattt gggatgctac 540
 aacaaaatac catagaccgg gtgacttata aaccacagaa atgtgtttct tatcgttctg 600
 gaggctggga agtccaagat cacggcattg tcagattcag tgtctggtga aggcctg 657

<210> 82
 <211> 625
 <212> DNA
 <213> Homo sapiens

<400> 82
 cagcccactg ctgagttttc ataataatgg aggaacaatg gtctttgaag ttacagataa 60
 tccccagtcc tcattgtggg catctctttc tgtccaatct ttctctggaa caactagcaa 120
 ggatgcaaaa ttgactgatg atctttctcc ttccccctgct tgaccctgca tacacaccgc 180
 ctctcgtaga agtgccaagg agcagtgaag tgacaaaaag gcagggagta ggagggagag 240
 gaaagaaaaa caaaccaagt gatcaacccc aaatgactga gtgttggtg tttctctatta 300
 tttactcctt tgagctttct cagatgtgtt tttctgagaa gactttcatg ttgtcttttc 360
 tttctctctt gatagttaac caccaatttc cctgcaatgg gctaagggtg cagagccctt 420
 gaatgaggtc caggtaggct gccagattct caagacacta aagcacaaca tttccatccc 480
 cattcttttg aaaacaggct tttaaattgt gcatgaagcc atgtcaatga tgaacaaaaa 540
 tgaaagtcac aaagtagtga gtgaaaattc aaaagcagtt catccatcct cggtattttac 600
 atacagcttt aaatatggta gattt 625

<210> 83
 <211> 648
 <212> DNA
 <213> Homo sapiens

<400> 83
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 gtctttaaac cctttggata ctggaaagcc tgacctggga ctgggtactt cagcagaaat 120
 aacacagggg agaacagagt caagtccgga ggtcagttca gtcacaggc agtggagcca 180
 caaggtgggg cagttttccc aggtgtctca tagtggtgta cttgagccag tgacctctaa 240
 agatagagca gagtccaagg aatgacctac aaagagtga ggggacaggc aagagctgat 300
 agctttggac caagaccacg ttccctgttc tgggtccatg atgctccctt cccctgtag 360
 agggcaggtg aggaccatgt ggatctttt ggaaatacat gtggatgttt gcaaatacag 420
 aaccgactgg tggaaagggc gaacatgaac agatgatgga agtctggccc tcatggacca 480
 tatgtgtttg gtggatatta gaccaatatt tgggaagaag cttgcagat actttctctc 540
 attagacatt ctactctctg attctgaatt tgactactct atgtacctga tatcagtgga 600
 ttccagagtg aatcagagtg tagaatagta gttccagga gctgggat 648

<210> 84
 <211> 555
 <212> DNA
 <213> Homo sapiens

<400> 84

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atccagcaga agcggcgccg ccaccgcgcc accaggaaga ttggcattgc tattgcgacc      60
ttcctcatct gctttgcccc gtatgtcatg accaggtggg tcctggcagt ccggctcctg      120
ttgtgggaac agctgggtgg gcttggcctc agttgagtag gcctctgagg tttcccagca      180
agataatctgg agggcggccca ccaccagagg accctcctcc acacctgacg ggctcagggc      240
tgtgcttcag ctcttgggaa agatcctggg agggaggtgg cactggctcc catcctgtcc      300
tataaatgag gagactctcc ttgtccaggc acaggcagat atgggggtctg tgaatcagca      360
cctggctctt taaacctaga aagctttcaa aatcaggcaa cctgggacta actcaggcct      420
cagactccgc atctcctggg cgtggagttg ggaatctggg tggaagctcc agctggagcc      480
tcggggcagt aacactgccca ggtgagtgtt ctctttgctt ctctctttcc tggagacctt      540
ggcctgagtg cttgt                                     555

```

<210> 85
 <211> 435
 <212> DNA
 <213> Homo sapiens

```

<400> 85
gctaattgctg tgctcatggt agagaaccgg aatacaagcc ctgctaagcc cgttgcaacc      60
acattaagct tctgcttggg tgcagaaagg gcatatgtcc tctcattcca ttggccaaag      120
tccaaagtca atgcgtcaga caggatcatc tactcctcct gtagaagcac aggaaagtta      180
tgggaaaatc gcaaaggatg tagaaacaaa ctacagagag tgaatgagga aacacaagca      240
agaaccacagc ctcagaaact ttgcctaaat acttatgcat tagaattaca tcagctatat      300
gtgtcagaaa gaccaagaga aaatggctta aaacaaaggg agaagtttat gtctccctca      360
cccaaatagaa tgggtccatgc tcagtataga ctttcacaac gttcaggact gaagctcttt      420
ctacgctgtt tctca                                     435

```

<210> 86
 <211> 630
 <212> PRT
 <213> Homo sapiens

<400> 86

```

Thr Ala Thr Thr Thr Ala Cys Thr Ala Ala Ala Cys Cys Ala Ala Thr
1           5           10          15
Cys Ala Thr Ala Ala Thr Thr Thr Cys Ala Ala Ala Thr Cys Cys Cys
          20          25          30
Thr Gly Ala Ala Ala Cys Ala Gly Gly Gly Ala Thr Cys Thr Thr Thr
          35          40          45

```

Gly Gly Cys Thr Ala Cys Thr Thr Thr Cys Thr Ala Thr Thr Ala Ala
 50 55 60
 Ala Gly Gly Ala Thr Ala Gly Ala Ala Cys Ala Ala Ala Gly Cys Ala
 65 70 75 80
 Cys Cys Thr Thr Cys Thr Cys Cys Ala Ala Thr Thr Cys Thr Thr Ala
 85 90 95
 Thr Cys Ala Thr Thr Thr Thr Thr Ala Gly Thr Thr Thr Thr Cys Thr
 100 105 110
 Thr Thr Thr Thr Thr Ala Cys Thr Thr Thr Cys Thr Ala Thr Cys Cys
 115 120 125
 Thr Thr Thr Thr Thr Thr Ala Ala Cys Ala Thr Gly Thr Ala Ala Thr
 130 135 140
 Thr Thr Cys Ala Gly Thr Gly Cys Cys Ala Ala Ala Ala Cys Ala Gly
 145 150 155 160
 Ala Cys Thr Thr Gly Cys Cys Cys Ala Thr Thr Thr Gly Thr Gly Cys
 165 170 175
 Thr Cys Ala Cys Cys Ala Gly Cys Ala Gly Cys Thr Thr Thr Cys Cys
 180 185 190
 Cys Ala Thr Ala Gly Ala Gly Ala Thr Gly Ala Ala Gly Ala Thr Ala
 195 200 205
 Ala Gly Cys Thr Gly Cys Cys Ala Gly Cys Ala Ala Thr Thr Cys Thr
 210 215 220
 Thr Ala Ala Cys Thr Ala Thr Gly Gly Thr Cys Thr Cys Ala Ala Thr
 225 230 235 240
 Gly Gly Gly Cys Cys Ala Thr Cys Ala Thr Thr Ala Gly Ala Gly Gly
 245 250 255
 Cys Ala Ala Cys Ala Cys Gly Thr Gly Cys Ala Thr Gly Cys Thr Gly
 260 265 270
 Ala Ala Gly Ala Gly Thr Ala Thr Thr Thr Gly Thr Thr Ala Ala Cys
 275 280 285
 Cys Thr Thr Thr Ala Ala Cys Thr Thr Gly Ala Ala Thr Thr Gly Ala
 290 295 300
 Cys Ala Ala Gly Cys Ala Ala Gly Cys Cys Cys Thr Thr Ala Ala Cys
 305 310 315 320
 Ala Ala Ala Ala Ala Gly Thr Cys Ala Thr Cys Thr Ala Cys Ala Cys
 325 330 335
 Ala Gly Ala Thr Thr Thr Cys Thr Thr Thr Cys Cys Thr Ala Ala Ala
 340 345 350
 Thr Gly Cys Cys Thr Gly Ala Gly Thr Thr Thr Thr Ala Thr Thr Thr

| 355 | | | | | 360 | | | | | 365 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Thr | Ala | Ala | Gly | Ala | Thr | Thr | Thr | Thr | Ala | Ala | Ala | Ala | Gly | Ala |
| 370 | | | | | 375 | | | | | 380 | | | | | |
| Ala | Thr | Ala | Gly | Cys | Thr | Cys | Cys | Ala | Cys | Cys | Thr | Ala | Gly | Cys | Cys |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Cys | Thr | Thr | Cys | Ala | Thr | Thr | Thr | Thr | Gly | Cys | Ala | Thr | Ala | Thr | Thr |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Thr | Ala | Thr | Thr | Thr | Thr | Ala | Cys | Thr | Thr | Ala | Gly | Ala | Cys | Thr | Gly |
| | | | | 420 | | | | | 425 | | | | 430 | | |
| Cys | Thr | Thr | Thr | Ala | Cys | Thr | Thr | Ala | Cys | Ala | Thr | Cys | Thr | Thr | Thr |
| | | | | 435 | | | | | 440 | | | 445 | | | |
| Cys | Cys | Cys | Cys | Ala | Thr | Thr | Cys | Thr | Ala | Gly | Cys | Thr | Cys | Ala | Gly |
| | | | | 450 | | | | | 455 | | | 460 | | | |
| Ala | Ala | Thr | Thr | Thr | Thr | Thr | Ala | Thr | Gly | Ala | Gly | Gly | Ala | Ala | Ala |
| 465 | | | | | 470 | | | | 475 | | | | | | 480 |
| Ala | Thr | Thr | Thr | Gly | Ala | Gly | Ala | Ala | Thr | Ala | Ala | Cys | Ala | Gly | Cys |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Cys | Cys | Thr | Ala | Gly | Thr | Thr | Ala | Cys | Cys | Thr | Gly | Thr | Thr | Gly | Gly |
| | | | | 500 | | | | | 505 | | | | | 510 | |
| Ala | Gly | Thr | Gly | Gly | Thr | Cys | Ala | Cys | Cys | Ala | Thr | Gly | Cys | Ala | Thr |
| | | | | 515 | | | | | 520 | | | 525 | | | |
| Thr | Cys | Thr | Thr | Thr | Ala | Thr | Ala | Thr | Gly | Gly | Cys | Ala | Gly | Cys | Thr |
| | | | | 530 | | | | | 535 | | | 540 | | | |
| Gly | Ala | Thr | Thr | Cys | Ala | Ala | Thr | Cys | Cys | Cys | Thr | Cys | Thr | Thr | Cys |
| 545 | | | | | 550 | | | | 555 | | | | | | 560 |
| Cys | Ala | Cys | Ala | Ala | Cys | Ala | Ala | Gly | Thr | Cys | Thr | Gly | Ala | Thr | Cys |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Thr | Ala | Gly | Ala | Gly | Ala | Gly | Thr | Cys | Ala | Ala | Ala | Gly | Gly | Ala | Ala |
| | | | | 580 | | | | | 585 | | | | 590 | | |
| Gly | Ala | Ala | Gly | Ala | Ala | Gly | Thr | Thr | Gly | Ala | Gly | Ala | Ala | Cys | Cys |
| | | | | 595 | | | | | 600 | | | 605 | | | |
| Thr | Gly | Cys | Thr | Gly | Gly | Gly | Ala | Ala | Thr | Cys | Thr | Cys | Cys | Thr | Gly |
| | | | | 610 | | | | | 615 | | | 620 | | | |
| Thr | Thr | Ala | Gly | Cys | Thr | | | | | | | | | | |
| 625 | | | | | 630 | | | | | | | | | | |

<210> 87
 <211> 357
 <212> DNA
 <213> Homo sapiens
 <400> 87

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atcttggtttt ttaaaagcta gtaacacaca cacacacgag ttctgcaagg cacactatga      60
aaacagtagc tcctgtccac ttcagtcttc tagttcccag aggcaattat tttcttttga      120
ttgtttttctt ttggtattta tctccatacc tctaaagctt atatigccac ttcttgatgt      180
tccagtttttc aacattgatt tticaatttt tccatgctgg aagaagagga tttaactact      240
ttctactatc tttcccgcgc actcaatata acacacacac tccatctctc acccccaccc      300
tctcaataat ttcaactaaa tcaataatca atatttacat cattataatg tgccgtg      357

```

```

<210> 88
<211> 679
<212> DNA
<213> Homo sapiens

```

```

<400> 88
ggcctgttcc agacacctta gaaggcaggg ctggtcctgg cagtccacac agaactgccg      60
ttctttttccc cagaactctc tccaagccgc tcccttcttt ggcttctcaa catctctggg      120
aatatgtggg tgctgttgcc cacatgtgtc atcgagacac ccctggccat ggagcttaga      180
taacttgccct gaactcatac agctaagagg agacaaaggc aggggtgtgac cctgggaggt      240
tgagctcctt accccactct tccccactgc cctccatggc acccgagtg gtttttctat      300
tttgggtgctg agttcatcct gtcttggggt acagcttggg gcttgagtat ctgtcttcct      360
cgtgattttcc tgagggtctc ttattttacaa gaaaccatgc cacaaattga ggaaccacag      420
aattcaagaa tgaattgaaa aagccctcac cctcaggaag tgtgcactgc tgtgtagcta      480
tgtgtgagtt tataaatagg tacaatagag gatagagggt gaggagccct cactggtggt      540
acaggagagaa ctggtgagtt ccacaaagag aatggcgtcc gccaggaat gggggagcat      600
cagctacacc tcctagatca aggactgtgt cccttgacca caccgtttat cctgcaagac      660
actgattttt acaggtgcc      679

```

```

<210> 89
<211> 626
<212> DNA
<213> Homo sapiens

```

```

<400> 89
caaaacagct gaatgctgtg tgaagcctct tgtataaagt tcttaatccc atttaggagg      60
gaggaacctt cgtgacctaa tcacctcctt aaaggcccca cctctttaat actgatgcac      120
tgagagacgtt tcaacatgaa ttttgagag acagaaacac ccaaaccata acagaaatga      180
aaaggggaagg gagtgatagg ttgcagaaaa gggagagggt aaggataaat gagatgtgag      240
taatgaaata agagaaccag atgattatta agaatatggt ataccatagt ctgacttcac      300

```



```

tactggagta tttctggatg atgcagagta cagacgaagg ggcaggtggc taaagtgaag      360
tagagatgag ggtccattgt agttgacagg tcaactaatt gggatacgca tgttttgaga      420
tagtgatcta cctggacatt gaaaatgata caggataagg gtgcatcttt atacgaagaa      480
ggtgactccc tattttaaga tgctgtcaac agataattgg tccacaaaat gggcagaaga      540
ggaagggagt agacaaagga ctgaatatgt tatctttatc ccctactaca cccgtggttg      600
aaattgtata aacgaggaat agtaaa                                           626

```

```

<210> 90
<211> 604
<212> DNA
<213> Homo sapiens

```

```

<400> 90
agtgaattg ttatttttct ttcgtctttt ctctgtcatt ttctgttcat ttttgggaga      60
agaatgctaa gttactaata taagtagcct tataaatgta aactcataat tgtcaggaaa      120
tgttacataa gcgaatgtct tctgcgtctt tcaacttttt ggtgccctta tgctgcccc      180
tgctgtccag tgtccacact tactgaaaat tgtcccaaac ttccaacctt ttctacttct      240
ctttactccg ccatcaaaaac ttacctggca agagaccag actgttggag tttccctcca      300
caatgccaat ggggttaacag acaaataaaa gaaagaagta gttctctctt tatttatccc      360
ttcatcattt tctggcaatt gacgcaagca tttgaactgg tgctctgtgg gcaatgcctg      420
atttctaggt tccccagctt gggattccaa accctccctg tgtagtcca agctactctc      480
atggacctgt ctctcccagt gtctaacctc tgcacatcat agcctactct ctatccgcac      540
tggtctctag ctgtgtttcc cacagccacg tgtgttcttc catctttgcc tgtgccaca      600
ctgc                                           604

```

```

<210> 91
<211> 637
<212> DNA
<213> Homo sapiens

```

```

<400> 91
tccaccaggt gccaccgctg ctccgtacca tggccaggtc cattttggag gcaccagacc      60
catgataaag cccaagctgt gaggaaggag aaaaatttag tgctctctc tttcttgag      120
tctgaaagat ggatgtgtgt aaccttgagt cttttagaaa ccttaataaa atgggtttta      180
ctcatggtcc ttctctccct aagaacctt agagctgggg tgggaatgaa tttatgtgac      240
atctactagg catactcaga atcattgctt tcctccaaga atgtggtcaa actggagcct      300

```

```

gtctttttcc tttcttccca ggaagacctc aggaaatctc agtgaagttg taccaagttt 360
tcttgcttta ttaacagatc tccagctatc tcaacatgat ttgggttaa attatatata 420
tttacttata ataatgactg tttagttaat gacttcctgt catatcagct tttagaaagc 480
tataccactt ttagggcaac tgtttctttt ttactatttc tctattggat ttgggtacaa 540
ttttctcacc ccaaaacact catggcatag tataatataa tataacctat gcacatcctc 600
tcatatactt caaatcatct ctgattatt tataata 637

```

<210> 92
 <211> 526
 <212> DNA
 <213> Homo sapiens

```

<400> 92
caaagacata ccaagtactt ctcatcttct ttgctttgaa agcctatttc ctgaaatgga 60
tttcagagcc cttcaccctt aacttcattt ttcttgagc ctgtatcttt atggtaatag 120
ctacagcctc aattcccaat cacctatgaa aggagacac tttatggaca ttttcttatg 180
aaatcctctg tacttatgaa ctttcataga tgtgatgttc agtcccattt tacagatgac 240
gtttccaga gtttcagtaa gttgccagc ttctaatttt aaaatactca atgtgtgtgt 300
gtgtgtgtgt ggtttggggg agaatgcagt gctcagagaa ccttaacttt aatgctaaat 360
atgtggcaaa agaatcttga gatattattt ttctcttgat aatttctgtg atttcttttc 420
aactctatcc ccaatcagaa aaggctcttc tgggccaaaa atgaagaggc agatttatgc 480
cagttaaggt gtggatcatg gaagaggacc catgggtatg actagt 526

```

<210> 93
 <211> 557
 <212> DNA
 <213> Homo sapiens

```

<400> 93
aataagtcta gcaagggaaa tttttttagg tgtttttatt attttttatt ttttattttt 60
ttgctctgga aactgttagt ccaaactgca ccattttgta acccccagc catttcgcag 120
acctcgggtc aagtgaaaca ttccacaggg gttcgggctg tgacaaacag cctgcccac 180
cgcttgactc tcttattata ttctgctgga agaaagtgtg aggaacctca cactgcaactg 240
gaacaggcac caaactgcct aatcatggga acatgttatc aacattttcc caggcagcag 300
gccatgcccc ctgttcaga cccctccac ctgcctata attgcccag cctgtaagtg 360
gcgatggcca ttggcattaa gctgcaggc ttatgctgga cataaagccg gcatttgcgtg 420
taaagccacc actctctctc tttgtgtctt tctttaacce tagccttccc ttcaaaaccc 480

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aacaaaaact atttataaga caatttttct tcatcctcca gtaagaacct aattttttgt 540
 ttgtttgttt tggtttg 557

<210> 94
 <211> 572
 <212> DNA
 <213> Homo sapiens

<400> 94
 ctgctttatc ttgggattcc agtatatcag cagggaattc catgcatcca ctcttgccat 60
 atccttttgt ggtgagtcct ctaatagcct gtgtcatttt gaaggagaag acgtctgccca 120
 ggccatgatg tgatatgtac tcagtgcagc tgggtgtttgt cagccacagg ccccgccgct 180
 ccactaagct tccattcctc ctgttcctcc tgtgttcaag aatgtggagc ctggctccct 240
 ctgggctcca aaaatgcttc aggctgggtc ctgtaaaatc ttaacatttc ctcccacccc 300
 tattccctta gcattgccac ctttttcata aaataattta tacaactgga aaggaagaaa 360
 aaaaatccag tgcaaaaata ccatacgtag aacaacatta tgaaatctcc ttaatgtcct 420
 gaaagctgca ccaggccatt tggaagatgc attagctaga taagtattaa cagaagggcc 480
 tatcacagaa acgttaccac aactaccacc ttttattaag ccccaggag aacttaaaac 540
 cagcccatca ctctgatgtc tgagacgggc ct 572

<210> 95
 <211> 706
 <212> DNA
 <213> Homo sapiens

<400> 95
 cttcaaaatt gtaagcttat ttttatataa accctcctaa agataattgc agaagttcaa 60
 gtaaaatacc tgacatgaag ttggcaattg cattcatttt ctatcgacac aataacatag 120
 tatgacagac ttagtagttc taaacaatac aaatttatta tctcagagtt ctttagatca 180
 aaagttcaac ataggctcct gagctaaaat caagggtctg taggcctgtg cttcttactg 240
 aaggttctag ggaagaatcc actttcaggt tcatgcatat tgttggtga attctattcc 300
 atgcagctat agaattttaa tccctgtttt cttgctggct aaaggctga atcatttttt 360
 accttttagag attgtctgct ttccttatct tatggccctt ttatcttcaa agtcagccat 420
 catgattcaa gtccctccat aattcatctc ttctgtcatc tattctgaca tgtcttctct 480
 gccaaagtct cactgactga ctcttcttcc ttcttctatt tgtaaaggcc cacatactaa 540
 tccagaataa tccctctatt ttaaaatcaa cttattagaa ccttaattcc atcttcaaaa 600

ttgtgtttcc atatatacata acatatccac aggcatttgg cacaagaggg tgacaattat 660
 ggcttgtgtt agccataaga taacagcacc taacaggtaa ataacc 706

<210> 96
 <211> 733
 <212> DNA
 <213> Homo sapiens

<400> 96
 atgtgccctg gtgcttccag gaactaggtg gccccccacc cccccgggg ctgggcacct 60
 taccagggg agagaataag ctgtgaagct ggtcctaggg tgcgaggatg gctggccggg 120
 gttgggctgg gaaggagagg ctggccaggc ttcttgctcc tgccccaca ctttcagcct 180
 cttccccaac ctttagcca ctgcttacc agcaaaggcc accagggcca cagcgaata 240
 gggagcccag gagagcacga agaggaggat gaccagcagc atgatcttgg ccatcttgca 300
 ctgctctgag agccgctgcc gctgccacag ggactcgcca ttgcccttgc agggcccgaa 360
 ggtctggaga gccctaggaa ggacgcacg tccaggtctg accctagtcg ggtggcagtc 420
 agcaccaggg tcacggctgc tgttggggag cctctctgga ctatccttgc agggcactcg 480
 tgagagtgtc attccttcca gtgcaggcag ccctgacttc cagaaagttt tctgtgacat 540
 gaggtctcag ctgcccccta ctccctcttg attctgtgtg ccttctctcc tccctctgcc 600
 atgccgaaaa gcccgcccca gaagcccttg tctcctgagg ctccctaga cactgctgcc 660
 ccataagcac ttgctcagct tgccttcacc cactgggtcat gctctggtag gctggtgcaa 720
 gtgtgagtgg tgg 733

<210> 97
 <211> 475
 <212> DNA
 <213> Homo sapiens

<400> 97
 acatcgatc ttttaaaagg ctttttaaag ctgataacaa gttaccttg attgcatata 60
 aaactctata ttttctctcc tctaactcat cttatgtttc tgatgtcaca atttactact 120
 tttatattgc atatgcctta acaaattatt gaatctatta ttatttttaa tagttttgtt 180
 tttcaacctt catactaaag atataagtaa ttgacatata accattacaa tattaagtg 240
 ttctgaattt gactatgcat ttacttttgc ttataagctt tatactctct acgtttatgt 300
 gttagtaatt agcatccttt tctttcaggt tttttccaat ataaagaact ctattagcat 360
 ttcttgtaag acaggatagg tgttactgaa ctctctcagc ttttttttgg gaaaaccttt 420
 atctcttttt ttatttctga aggacagctt tgccatgtac agtattcttt tttgg 475

<210> 98
 <211> 552
 <212> DNA
 <213> Homo sapiens

<400> 98
 atacataacca tgaaatgggt atgggagggga gataagggat ttaagaattg ctccaggttc 60
 ttcagagaga actgagcctc tgttgtcttt actcaagaag ttgatctcta gttagagaat 120
 ggcattcatt catactttca ttcattcagt tattcattcc ttcaacaact tttggaaggt 180
 actttctgtg tgacaaacac atcacaaaca actgtaatat aggctgcaga tacgaaaaca 240
 tatttgctgc catgatgtag aaaaaatcac tgcaaacatt ttaaaagttt ggaaaatata 300
 gctcagattg aatttttgcc ctaagataaa aaaaatcatt gggagataaa agcaatatat 360
 gaacatggag ttaatagatt ttttcccttt taacatagat aacagtacat agtgattcat 420
 ttgtcctctg tcatttggtc ttgaggaaca ctaatgccct aatatgtgta atgttcagta 480
 acaaatgcta aataaaaata caggaataaa aatccattaa gcatgtattt aatactgtgt 540
 aacacttact gt 552

<210> 99
 <211> 514
 <212> DNA
 <213> Homo sapiens

<400> 99
 cctgctggcc ggagcagcgg caggggaaggt agacgactgc aaggcattgg aaacggcccc 60
 tctgcatcag gaggacaccc tgggtgcagg aggaggcttc gctgaaaagc attgcaacag 120
 cattatcaca tacgtggaaa taagaattgc atctcaaccc ttcccttgcc ctccacccat 180
 ctaacatgcc tcagccctcc tgtggccata gtaacctgaa cagtaactac agcagcaggc 240
 tgcttaggtg ccaggtgtaa gaagagaaat ttcattgaaa caggaaaata tagcctgctt 300
 ttctccccag ctctaacctt tcaacctata actactccct actgtaattt ttgtgggatt 360
 tgctgatatt gaaggaagat gattgaaaat ctgcttaaga tttcgtcttt atttcccgt 420
 tgacaggcct agggccccac tgaggaagtg tttctctctg cagagccctc agccacccca 480
 tatgtcccag ggatgtgctc aagtcacgag gacc 514

<210> 100
 <211> 526
 <212> DNA
 <213> Homo sapiens

<400> 100
 caaagacata ccaagtactt ctcattcttc ttgctttgaa agcctatttc ctgaaatgga 60
 tttcagagcc cttcaccocct aacttcattt ttccttgagc ctgtatcttt atggtaatag 120
 ctacagcctc aattcccaat cacctatgaa aggagacac tttatggaca ttttcttatg 180
 aaatcctctg tacttatgaa ctticataga tgtgatgttc agtcccattht tacagatgac 240
 gtttcccaga gtttcagtaa gttgccagc ttcctaatttt aaaataactca atgtgtgtgt 300
 gtgtgtgtgt ggtttgggggt agaatgcagt gctcagagaa ccttaacttt aatgctaaat 360
 atgtggcaaa agaattctga gatattattt ttctcttgat aatttctgtg atttcttttc 420
 aactctatcc ccaatcagaa aaggctcttc tgggccaaaa atgaagaggt agatttatgc 480
 cagttaaggt gtggatcatg gaagaggacc catgggtatg actagt 526

<210> 101
 <211> 647
 <212> DNA
 <213> Homo sapiens

<400> 101
 agcacataag gatttttttc catgccccta tgatttcatt tccaaccaat cagcagcatt 60
 cactgcctag cctcctaccc atgaaattgt acataaaaac cctgagctca aagcctttgg 120
 gaagactgat ttgagtaaaa tgccctgatc tcctgtgtgg ccagtctcgt gtcaattaaa 180
 ctctctacta caatgccatg gtgtcaatgc atcttgtctg tgcagtgcgc agaaagaacc 240
 cactggcaat tacattacca gtagctatcg ctcttctgtc cttcaaacag gaaatacttc 300
 aaccctggta agtcaattag ggtttctcat tcatttgccg agctcctggg ggccctggcct 360
 gagactctct ctgoggctcc tgtaactcag tggccctttt cattctcaga aacatttttc 420
 ctgaacctgt gtgttccctg cctcaatctg tattggctaa tttctaggcc tgttaaataa 480
 ctgtcaatct tgaccccatc ataattacca tctagaaatg ccatttgtct ctcatthttg 540
 tcatactctc tgcttcctgg attctgggaa gtttatgctt tgggtgacaa atatccatct 600
 gagaaaaaaaa atacatgaaa cttcttttaa ttctttactc cataata 647

<210> 102
 <211> 491
 <212> DNA
 <213> Homo sapiens

<400> 102
 ttatttgaaa taacttatag gaaatgactt aagtaatata aaacacatca cacattttat 60
 ctgtatgttg aatatcaaaa ttgagattcc tagaaaattc ttattttcaa aagtatatat 120

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ccagattact tgtaagcatt ggaaagacaa tggctaataca ctcacatttt ggaaatgaaa 180
gaaattacct caatcaggac aagticttag tgtcactcat ttagtggttag atccatgata 240
gagaatgcaa ttctcagacc aaagattatg gttgggtcct taactatgcc ttgaataaac 300
taaacaactt cccattttatc agctggagaa cttacaatgt tataggagtg gtcaitgggt 360
taagaaaatg tttaacagaga gggtatatat tgtattagaa agctgtttat caggccatga 420
atgtgctatc cacagagaaa ctatgttttg tggatatggg aaggaaagga gtaataaagg 480
caaatgcatt g 491

```

```

<210> 103
<211> 604
<212> DNA
<213> Homo sapiens

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```

<400> 103
acatgttcag tcaatttttaa aatgtaacaa aagaaaatga attattatta aattactaac 60
tactttgttt taggcactga gctaagtagt tgcttttggt taaattcctt ttaaaaggtc 120
gcactagcct tgggtctaaat actaagcttc aaagactgaa tgggaatact attgagtaca 180
tgcacttagt tctcagtatc ttcttccttt ctgctccttt agcagggtcca gaccaagcaa 240
gtctgggtggg gaggagcctg ttctagatct ggagagtccc tgcattccaat tccaattggg 300
tactaagttc actattaggg tgacagggtc aatagaaacc caaacgtcag catcacataa 360
tatatccatg taacaaacct gcacatgtgc cctagaatct aaaattaaat aaataaataa 420
ataaataaag cagtggacct gggataggcc atgaatatct actatttttag atgaaggatt 480
aggacagtcc atggatacag tgctttctta aatagaccct caaaattctg catcataaaa 540
tcttgatact caggagcaat ttgaagcact ccatttggtg ctggagtgtt tttgagttgc 600
tttg 604

```

```

<210> 104
<211> 232
<212> DNA
<213> Homo sapiens

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<400> 104
atgatttttg gattttaaata ttaccacgga tcccttcttc cttcttgagt ttttctaagg 60
agtgatagac tggaaacagt aaccatactg aaagtgaat ttctggatcc atgagggttt 120
ggcacaaccc aatggagaaa tctgggaaaa gctgaattgg aaaagtgggtg tgagactggg 180
aggttcgggg taggcttttg ctcttacttc taagtctgag tcgatagggtg tg 232

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<210> 105
 <211> 524
 <212> PRT
 <213> Homo sapiens

<400> 105

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Thr Thr Ala Gly Gly Gly Ala Thr Ala Cys Ala Gly Cys Cys Ala Thr
1      5      10      15
Thr Cys Ala Thr Gly Gly Thr Gly Thr Thr Thr Cys Ala Thr Gly
20      25      30
Ala Ala Cys Thr Thr Ala Thr Cys Cys Cys Thr Thr Ala Thr Gly Ala
35      40      45
Ala Thr Gly Cys Ala Thr Ala Thr Gly Ala Thr Ala Thr Gly Thr Thr
50      55      60
Cys Ala Thr Thr Cys Ala Cys Cys Thr Cys Thr Thr Thr Gly Thr Ala
65      70      75      80
Gly Ala Ala Ala Gly Cys Thr Thr Thr Gly Ala Thr Cys Gly Thr Thr
85      90      95
Thr Thr Gly Cys Ala Cys Ala Ala Ala Cys Ala Gly Gly Gly Ala
100     105     110
Ala Gly Thr Ala Gly Thr Ala Gly Thr Ala Gly Thr Gly Gly Cys Ala
115     120     125
Gly Thr Ala Thr Gly Gly Ala Thr Thr Thr Gly Gly Gly Ala Gly Gly
130     135     140
Gly Thr Gly Ala Ala Gly Thr Thr Ala Gly Cys Thr Thr Thr Gly Gly
145     150     155     160
Cys Cys Ala Gly Gly Thr Gly Ala Thr Cys Thr Cys Thr Gly Cys Ala
165     170     175
Thr Ala Thr Cys Ala Gly Ala Cys Thr Ala Thr Thr Ala Ala Ala Gly
180     185     190
Gly Cys Ala Gly Cys Gly Cys Cys Thr Thr Thr Ala Cys Ala Gly Ala
195     200     205
Ala Thr Gly Thr Thr Gly Gly Cys Thr Gly Gly Gly Cys Thr Gly Thr
210     215     220
Gly Ala Cys Thr Cys Ala Thr Gly Cys Thr Thr Thr Gly Cys Thr Thr
225     230     235     240
Thr Gly Cys Ala Cys Thr Cys Cys Cys Thr Ala Ala Ala Gly Ala Gly
245     250     255
Gly Cys Thr Thr Thr Ala Thr Gly Thr Ala Thr Cys Gly Cys Cys Thr
260     265     270
Cys Thr Thr Thr Gly Thr Cys Cys Thr Thr Thr Cys Cys Cys Ala Ala

```


| 275 | | | | | 280 | | | | | 285 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Thr | Cys | Ala | Thr | Thr | Thr | Gly | Ala | Ala | Ala | Ala | Thr | Ala | Ala |
| 290 | | | | | 295 | | | | | 300 | | | | |
| Thr | Ala | Gly | Ala | Ala | Gly | Ala | Gly | Ala | Gly | Ala | Ala | Thr | Ala | Ala |
| 305 | | | | | 310 | | | | | 315 | | | | Thr |
| Gly | Thr | Gly | Ala | Thr | Cys | Ala | Gly | Gly | Gly | Gly | Cys | Thr | Cys | Thr |
| | | | | 325 | | | | | 330 | | | | | 335 |
| Ala | Thr | Thr | Gly | Thr | Ala | Thr | Thr | Thr | Ala | Thr | Thr | Gly | Cys | Thr |
| | | | 340 | | | | | 345 | | | | | 350 | Thr |
| Ala | Thr | Gly | Thr | Ala | Gly | Gly | Gly | Thr | Thr | Gly | Thr | Ala | Gly | Thr |
| | | 355 | | | | | 360 | | | | | 365 | | Ala |
| Gly | Ala | Thr | Ala | Cys | Ala | Gly | Gly | Gly | Ala | Thr | Gly | Thr | Thr | Cys |
| 370 | | | | | 375 | | | | | 380 | | | | |
| Cys | Thr | Thr | Ala | Thr | Thr | Cys | Thr | Thr | Thr | Ala | Thr | Gly | Thr | Cys |
| 385 | | | | | 390 | | | | | 395 | | | | 400 |
| Thr | Gly | Cys | Ala | Cys | Ala | Thr | Cys | Thr | Gly | Ala | Ala | Ala | Thr | Gly |
| | | | | 405 | | | | | 410 | | | | | 415 |
| Gly | Thr | Cys | Ala | Thr | Ala | Ala | Thr | Ala | Ala | Ala | Thr | Gly | Ala | Thr |
| | | | 420 | | | | | 425 | | | | | 430 | Ala |
| Thr | Thr | Thr | Thr | Ala | Ala | Ala | Ala | Ala | Ala | Cys | Thr | Ala | Ala | Ala |
| | | | 435 | | | | | 440 | | | | 445 | | Cys |
| Ala | Gly | Ala | Ala | Cys | Ala | Ala | Cys | Thr | Ala | Gly | Thr | Thr | Thr | Gly |
| 450 | | | | | 455 | | | | | 460 | | | | |
| Gly | Gly | Ala | Ala | Thr | Thr | Thr | Gly | Thr | Cys | Cys | Thr | Ala | Cys | Ala |
| 465 | | | | | 470 | | | | | 475 | | | | 480 |
| Ala | Gly | Thr | Cys | Ala | Thr | Ala | Thr | Gly | Ala | Cys | Thr | Cys | Ala | Thr |
| | | | | 485 | | | | | 490 | | | | | 495 |
| Thr | Gly | Cys | Ala | Thr | Ala | Gly | Ala | Thr | Cys | Cys | Thr | Ala | Ala | Thr |
| | | | 500 | | | | 505 | | | | | 510 | | Ala |
| Thr | Gly | Ala | Thr | Cys | Ala | Thr | Ala | Gly | Cys | Thr | Thr | | | |
| | | | 515 | | | | 520 | | | | | | | |

<210> 106

<211> 346

<212> DNA

<213> Homo sapiens

<400> 106

tcttccttg ttttatctta tatcaaactc tataaggaat aggatcacac agctcctaatt 60

aaggaggagc ataaggtaaa atcatgcaca gcatttttagt tagaaaatat taatctttat 120

gttttcattt cttagtcttt taaataataa aaatgcatcg aaatgtttta aacttttaaat 180

attgtaaaaag ttatagtaag acacgttgcc aactagattc atgcatctaa ttccctgaat 240
 tatagttaat agtttcatat tataaactct tgataaaaagt aataaataca tggcagatac 300
 acacatgcac atttgtatta tataatagta gtccagtga cgttc 346

<210> 107
 <211> 578
 <212> DNA
 <213> Homo sapiens

<400> 107
 ctcacatatt accttcaaag aaacctgtcc taataaaagc cattcctact ctacttggcc 60
 tccaggattt aaccacttcc tacattcaac catcctggga cctagcttta ctagacttca 120
 attttgacct tatttatctt gccttttgtc ataattgctt ctgtctttcg tgctccatta 180
 aacactaagg tttttgagag caggaactca aaacacttta aattcctctc tcttcatatg 240
 cagttgcttt tgcacagtca atacacagta aatgctgatt gaattgaaag gatctcactc 300
 ttagaatgca attctctcag agtctccaac tagtctagta gcttaaagac caatcctact 360
 taaaaattaa ctggaattgt aagtacaaca aaatcactcc aagttattaa cctaaccatt 420
 gaagtgttta ttttctact tggaaaacca ggtcaaccac agggaccaac ctaccctgga 480
 taggtgactc taaaagtaat gaggttaattt cttcaaaaa tgacaaaagct ttcaggattc 540
 tctggaatgc ataccatta atgtgtcacc attaatca 578

<210> 108
 <211> 692
 <212> DNA
 <213> Homo sapiens

<400> 108
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 tgaattcatt tttggaatac agtaggatta ccaggtttgt gtcataatt taaagtgaga 120
 ccagtcaaca gtgttgcaat ttccttatag ccatttcagc tactcaagcc catgtgtgga 180
 ataaacagac agtctgattc aactagggac ggagtttgcc cgagggcata accactaaac 240
 agaagaaaaa aggagaaagg gaggggtgac tgcactcaaa aaatacaata agtaggtatt 300
 tacctggctt acgttctaaa agctgctgta aatgaaacac tgcttgttca tagtcttgtt 360
 ttctgaacat gagatcagcc atcatctata aagataaaaag ttggttctaa aaatattgcc 420
 atgtatttta cacaacatgt tcttccaatc aagatttagc actagaaaaa tatagatgat 480
 aaacatgagg agggggcagc attttataaa aaggaggcat ttaagattca agcccacctt 540
 gtgcagaata acttgcagat cagtgtaca gaagataatc aaggatgtga aacagattgc 600

tctgcttgca aaattgtatt tttagcaaaa aatatgtttc tagcaattgt tttaaaaaca 660
gaaatttgaa ggaattgcac actctatgtg ct 692

<210> 109
<211> 674
<212> DNA
<213> Homo sapiens

<400> 109
actttgtcct atgcatcttt tcccttggtt aatctgtgtc tgtatcctct ccctgtaata 60
aactgtaatc gcaagtgagc tgctttcagt gagttttttg agtggtccta gtaaattatc 120
aaacctgaag gggatttgagg gaactccttg aatttgcaat tgggtgttagg agtgaagaca 180
atcttgtgtg taccgtgttc tctctaactt tatggggttt aggcattggtg ggtggtagag 240
aatgaagtag gtgtgtaaaa ttaactgtga tctgattctt acctaaaaaa aaactttccc 300
catagcaggg ctgatataaa gaagccacaa cttagggtttt tcctactttg cacacaaaat 360
tccaacagtg gaacttctga atgatttact taggaaatta catatggaga aatgttttga 420
aactacaaat tctcaccaaa gatttcctaa aatactccaa taagggtgata gactgtaatc 480
agaactcaca tttaccacaaa aggagatggt attctatttt gaaagtaatt atattactgg 540
gaaaacaatg tttaccagtt ttaattataa tactggaaac aacagttttt ataaatgttt 600
ctgaatgaat ttacaattta aatgaataaa tccttatgcc taaaatgaac actgggcaca 660
tttttaagca ctac 674

<210> 110
<211> 579
<212> DNA
<213> Homo sapiens

<400> 110
tatacttaag attatttctt tggacactgt tctgttatag taatgtgtct gatcctacag 60
aagtaccata gtattttaat cattataatt tccaatataa gttatacgtg atagatcaag 120
ttctttataa ttttttcttc ttcagagttt tatctggaat ttattctggt gtttgatatg 180
acataaatat ctaatttgtc tcccaaacag agtcaagatg attcctgtaa tgttactaat 240
ttgtgttctg agaaggaaga aaagtggcag cactatggca ctgggaattc tgcataaacc 300
catgaaagca gtcacctttg tgaacgtgtt tttgggtggaa acaagtgttg agaaccattg 360
ttgtataata gtgctgtcca gtagaactta ctctggtgat gggaatactc tatagctgta 420
ctttccaata tggatttcac tgaccacatg tggctatcaa gtacttgaaa tgtggctagg 480

tgactgagga accgaaatTT ttagtcttat ttaattgtaa tcagtttaaa tttatacaac 540
 tgcataTTTT attgaataga gcactttcta gagcatagc 579

<210> 111
 <211> 199
 <212> PRT
 <213> Homo sapiens

<400> 111

Gln Ile Pro Ser Phe Ser Pro Leu Thr Asn Glu Leu Leu Leu Phe Pro
 1 5 10 15
 Trp Thr Gly Tyr Glu Ile Arg Gln Phe Asn Pro Leu Ile Tyr Asp Asn
 20 25 30
 Gly Arg Asp Val Ala Glu Asn Pro Glu Leu Ser Val Leu Leu Ile Lys
 35 40 45
 Thr Thr Leu Val Met Val Thr Lys Gly Lys Tyr Ile Pro Leu Met Ser
 50 55 60
 Arg Phe Thr Leu Ser Leu Thr Met Thr Gln Leu Cys Gly Ala Glu Ser
 65 70 75 80
 Asn Thr Ala Ser Leu Ile Leu Leu Gln His Lys Ile Tyr Ser Glu Ser
 85 90 95
 Asp Lys Trp Ile Asn Leu His Met Asp Glu His Asp Leu Leu Leu Ser
 100 105 110
 Lys Val Pro Lys Asp Thr Glu Lys Asn Leu Val Met Leu Leu Asp Asp
 115 120 125
 Val Phe Asp Asn Thr Ile Gln Tyr Leu Ser Met Tyr Pro Tyr Asp Ile
 130 135 140
 Glu Lys Gly Phe Ser Lys Tyr Phe Asn Leu Asn Arg Phe Thr Lys Arg
 145 150 155 160
 Asn His Leu Pro Thr Thr Val Pro Cys Leu Trp Ser Ile Arg Val Ile
 165 170 175
 Ile Leu Phe Ser Leu Tyr Tyr Lys Arg Glu Cys Thr Leu Phe Lys Ile
 180 185 190
 Asn Asn Ile Asp Tyr Ile Ser
 195

<210> 112
 <211> 231
 <212> PRT
 <213> Homo sapiens

<400> 112

Glu Leu Lys Thr Glu Asn Val Cys Lys Tyr Val Lys Tyr Val Tyr Lys

[illegible]

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<210> 113
<211> 211
<212> PRT
<213> Homo sapiens
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<400> 113

Trp Phe Val Ile Ile Val Gly Cys Phe Ile Ile Thr Phe Tyr Asn Leu
 1 5 10 15
 Tyr Ser Phe Ser Ile Thr Tyr Val Ala Ile Ser Met Ser Leu Tyr Leu
 20 25 30
 His Gln Tyr Leu Leu Ile Tyr Ile Glu Ile Lys Phe Ser Leu Gln Arg
 35 40 45

Ser Arg Arg His Pro Leu Ile Ser His Ile Asp Tyr Trp Leu Leu Thr
 50 55 60
 Ser Asn Leu Ser Pro Cys Tyr Val Ala Pro Arg Glu Met Tyr Thr Leu
 65 70 75 80
 Leu Ser Gln Val Ile Leu Ile Cys Thr Glu Ser Leu Thr Ser Leu Lys
 85 90 95
 Leu Leu Val Val Ser His Tyr Leu Thr Lys Phe Lys Pro Tyr Asp Val
 100 105 110
 Gln Thr Leu Ser Trp Leu Phe Phe Ile Phe Pro Ile Leu Leu Tyr Ser
 115 120 125
 Phe Tyr Leu Ser Gln Thr Ala Ala Ile Ser Asp Phe Leu Gln Phe Cys
 130 135 140
 Lys Ser Thr Lys Trp Leu Cys Arg Ser Asn Tyr Val Phe Thr Tyr Leu
 145 150 155 160
 His Leu His Arg Met Leu Phe Leu Ile Leu Cys Phe Ser Gly Glu Asp
 165 170 175
 Leu Ile Leu Phe Glu Gly Asn Ala Leu His Lys Asn Ser Ser Phe Ser
 180 185 190
 Pro Gln Asn Glu Val Leu Thr Phe Ile Phe Trp Val Leu Thr Leu Asn
 195 200 205
 Val His Thr
 210

<210> 114
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 114

Ser Arg Tyr Thr Thr Leu Leu Met Lys Ser Ser Tyr Arg Ser Glu Lys
 1 5 10 15
 His Phe Phe Pro Thr Asn Leu Ile Leu Glu Leu Asn Thr Leu His Gln
 20 25 30
 Val Asp His Lys Leu His Leu Ile Asn Ala Gln Cys Leu Thr Met Ser
 35 40 45
 Trp Ile Val Ser Gln Gly Gln Val Lys Ala Cys Thr Arg Gly Glu Val
 50 55 60
 Arg Glu His Thr Ala Phe Tyr Lys Ser Thr Ile Val Pro Ile Leu Gln
 65 70 75 80
 Trp Leu Leu His Ile Leu Leu Thr Phe Leu Phe Ser Phe Phe Cys Trp
 85 90 95

Phe Ala Leu Asn Pro Pro Leu Ser Lys Asp Ile Arg Met Tyr His Leu
100 105 110

His Ser Leu Cys Gln Asn Cys Lys Met Pro Phe Ile Phe Leu Asp Met
115 120 125

Ser Gln Ile Ala Lys Lys Met Lys Ile Leu His Phe Leu Phe Ile Leu
130 135 140

Ser Pro Gln Thr Ser Ser Thr Cys Phe Ala Val Leu Arg Gly Glu
145 150 155

<210> 115

<211> 205

<212> PRT

<213> Homo sapiens

<400> 115

Ile Asn Val Ala Asn Asn Lys Asn Leu Phe Cys Ser Ser Ser Gly Gly
1 5 10 15

Lys Ser Lys Glu Asn Gln Gly Val Ser Arg Met Glu Ala Leu Glu Ser
20 25 30

Arg Glu Glu Phe Phe Ile Phe Ser Leu Leu Leu Val Ala Pro Ser Asn
35 40 45

Leu Gly Ile Pro Trp Phe Val Ala Ala Ser Leu Gln Phe Leu Pro Ser
50 55 60

Ser Phe His Glu Leu Ile Ser Cys Val Cys Leu Cys Ile Ser Ser Leu
65 70 75 80

Phe Met Gly Cys Gln Leu Leu Asp Leu Arg Pro Thr Leu Thr Gln Tyr
85 90 95

Glu Leu Ile Leu Thr Leu His Leu Gln Arg Pro Tyr Leu Gln Ile Arg
100 105 110

Ser Pro Ser Glu Val Leu Gly Arg His Thr Phe Trp Gly Asp Thr Ile
115 120 125

Gln Leu Ile Thr Pro Gln Pro Pro Lys Leu Glu Arg Ala Asn Thr Glu
130 135 140

Asn His Arg Leu Gln Gly Ala Glu Ala Ser Lys Cys Asn Thr Lys His
145 150 155 160

Leu Asn Asn Asn His Ile Ala Gly Gly Trp Ser Val Asp Leu Glu Thr
165 170 175

Lys Leu Leu Arg Ala Thr Cys Gly Glu Asp Thr His Phe His Lys Phe
180 185 190

Tyr Leu Glu Pro His Gln Val Leu Met Ile Lys Cys Glu
195 200 205

<210> 116

<211> 216
 <212> PRT
 <213> Homo sapiens

<400> 116

Lys Thr Gly Ile Val Leu Asn Ile Phe Ile Leu Leu Leu Val Glu Trp
 1 5 10 15
 Met Val Ile Lys Leu Gly Gly Thr Lys Arg Lys Ser Leu Gly Ile Gln
 20 25 30
 Asp Leu Gln Thr Phe Phe Ser Thr Pro Glu Gln His Leu Leu Leu Leu
 35 40 45
 Cys Cys Tyr Phe Leu Ile Thr Ile Ser Val His Phe Cys Val Ser Gly
 50 55 60
 Leu Ser Glu Thr Leu Ser Ala Leu Arg Ala Gln Val Cys Gly Cys Leu
 65 70 75 80
 Cys Val Cys Val Cys Val Cys Ile Tyr Ile Tyr Ile Phe Met Tyr Val
 85 90 95
 Cys Val Tyr Ser Leu Phe Arg Pro Phe Phe Lys Leu Phe Ala Val Leu
 100 105 110
 His Leu Arg Ile Tyr Thr Val Phe Tyr Leu Ser Phe Leu Asn Val Tyr
 115 120 125
 Arg Tyr Lys Thr Glu Tyr Phe Gln Glu Trp Lys Ser Ile Phe Arg Tyr
 130 135 140
 Ile Ser Gln Tyr His Ala Val Glu Cys Ser Asn Leu Leu Gln Phe Thr
 145 150 155 160
 Ser Ile Asn Leu Val Gly Asn Cys Gly Lys Val Trp Val Ser Thr Arg
 165 170 175
 Lys Gln Ile Gln Ala Leu Glu Ile Leu Ile Pro Phe Leu Gly Phe Pro
 180 185 190
 Phe Gly Leu Leu His Cys Tyr Pro Phe Cys Lys Thr Ser Thr Pro Phe
 195 200 205
 Val Ser Ile Cys Ser Thr Asn Ala
 210 215

<210> 117
 <211> 237
 <212> PRT
 <213> Homo sapiens

<400> 117

Tyr Phe Leu Pro Ala Phe Ile Ser Gly Glu Leu Met Thr Asn Val Lys
 1 5 10 15
 Asn Glu Glu Leu Arg Leu Lys Ile Leu Glu Thr Arg Tyr Ala Pro Lys

20 25 30
 Gln Val Thr Val Met Leu Leu Ser Ile Ala Ile Ile Ser Ala Leu Leu
 35 40 45
 Trp Leu Pro Glu Trp Val Ala Trp Leu Trp Val Trp His Leu Lys Ala
 50 55 60
 Ala Gly Pro Ala Pro Pro Gln Gly Phe Ile Ala Leu Ser Gln Val Leu
 65 70 75 80
 Met Phe Ser Ile Ser Ser Ala Asn Pro Leu Ile Phe Leu Val Met Ser
 85 90 95
 Glu Glu Phe Arg Glu Gly Leu Lys Gly Val Trp Lys Trp Met Ile Thr
 100 105 110
 Lys Lys Pro Pro Thr Val Ser Glu Ser Gln Glu Thr Pro Ala Gly Asn
 115 120 125
 Ser Glu Gly Leu Pro Asp Lys Val Pro Ser Pro Glu Ser Pro Ala Ser
 130 135 140
 Ile Pro Glu Lys Glu Lys Pro Ser Ser Pro Ser Ser Gly Lys Gly Lys
 145 150 155 160
 Thr Glu Lys Ala Glu Ile Pro Ile Leu Pro Asp Val Glu Gln Phe Trp
 165 170 175
 His Glu Arg Asp Thr Val Pro Ser Val Gln Asp Asn Asp Pro Ile Pro
 180 185 190
 Trp Glu His Glu Asp Gln Glu Thr Gly Glu Gly Val Lys Ile Val Ser
 195 200 205
 Lys Gln Asn Lys Leu Leu Leu Tyr Leu Leu Val Leu Leu Leu Ile Asn
 210 215 220
 Ile Ala Asp Phe Thr Asn Tyr Asn Tyr Tyr His Glu Leu
 225 230 235

<210> 118
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 118

Leu Leu Pro Tyr Pro Gly Val His Leu Phe Ala Glu Pro Leu Leu Leu
 1 5 10 15
 Gly Leu Ser Pro Cys Ser Ser Leu Trp Ser Phe Ser Asn Arg Gly Arg
 20 25 30
 Met Ala Ala Asp Pro Leu Pro Pro Ala Arg Arg Arg Asn Arg Arg Gly
 35 40 45
 Val Lys Val Pro Asp Gln Ile Gly His Pro Arg Pro Gln Gln Ala Gln
 50 55 60

Gln Cys Thr Ser Val Gln Ala Ala Pro Phe Ala Gly Val Thr Met Pro
 65 70 75 80
 Ser Pro Thr Gly Cys Leu Cys Phe Tyr Gly Asp Phe Cys Thr Leu Ile
 85 90 95
 Leu Thr Arg Cys Thr Asn Gly Val Gly Met Gly Leu Trp Gln Lys Ala
 100 105 110
 Val Ala Ser Val Ile Phe Ala Ser Pro Arg Phe Gln Leu Ser Thr Arg
 115 120 125
 Pro Leu Val Ala His Phe Leu Leu Ile Thr Phe Val Pro Val Asp Pro
 130 135 140
 Asp Tyr Ser Leu Cys Ser Ala Ala Leu Gly Gly Leu Ser Leu Val Ala
 145 150 155 160
 Ser Arg Pro Leu Leu Trp Ser Lys Ser Pro Ala Lys Leu Asn Ser Ser
 165 170 175
 Val Val Gln Asn Arg Phe His Leu Gln Glu Lys Asn Lys Met Thr Gln
 180 185 190
 Ile Val Thr His Pro Asn His Thr Val Gln Arg Val Lys Val Asp Ile
 195 200 205
 Ala Ala Ala Ser Arg Leu Asp Ile
 210 215

<210> 119
 <211> 208
 <212> PRT
 <213> Homo sapiens
 <400> 119

Glu Ser Val His Gly Arg Pro Tyr Val Pro Gly Thr Gly Tyr Val Leu
 1 5 10 15
 Gly Lys His Leu His Lys Ala Gln Asn Cys Leu Ser His Ser Lys His
 20 25 30
 Glu Phe Trp Gly Arg Gly Asn Arg Asp Asn Lys Val Ile Thr Met Glu
 35 40 45
 Ser Leu Leu Arg Lys Arg Thr Asp Trp Ala Ser Ala Phe Ile His Ser
 50 55 60
 Phe Ile Cys Ser Gln Thr Cys Ile Glu His Leu Glu Trp Ser Pro Val
 65 70 75 80
 Cys Ile Leu Val Arg Leu Asp Gly Ser Arg Asp Phe Leu Pro Leu Arg
 85 90 95
 Ser Leu Gln Asn Pro Gly Arg Glu Ile Phe Pro His Ile Val Thr Val
 100 105 110

Cys Pro Pro Gly Glu Leu Leu Thr Trp Gly Lys Glu Pro Gly Lys Met
115 120 125

Cys Leu Ser Cys Ala Cys Leu Asp Val Thr Ser Ser Val Arg Ser Gln
130 135 140

Glu Lys Val Ala Arg Cys Arg Arg Gln Val Ala Arg Ile Leu Leu Phe
145 150 155 160

Glu Pro Ser Val Met Arg Arg Gln Met Cys Asp Val His Phe Leu Cys
165 170 175

Leu Phe Leu Phe Phe Phe Asn Lys Asn Val Val Phe Asp Cys Arg Asn
180 185 190

Lys Ala Ser Ile Ile Lys Phe Ala Cys Met Leu Asn Glu Ser Met Cys
195 200 205

<210> 120

<211> 179

<212> PRT

<213> Homo sapiens

<400> 120

Thr Gly Pro Thr Pro Asp Gly Pro Pro Ala Pro Val Ala Val Ser Met
1 5 10 15

Leu Ser Thr Ser Pro Cys Ala Ser Ile Leu Gly Leu Cys Leu Cys Ser
20 25 30

Gln His Arg Cys Val Leu Ser Thr Ala Glu Ile Arg Thr Phe Thr Ile
35 40 45

Pro Pro Ala Ala Ser Gly Ala Pro Leu Cys Ser Gly His Leu Thr Leu
50 55 60

Leu Gly Pro Pro His His Cys Thr His His Thr Pro Asn Ser Pro Ala
65 70 75 80

Pro Pro Pro Gly Arg Gly Ser Val Pro Glu Ser Tyr Asp Leu Gly Thr
85 90 95

Pro Ser Pro Ser Leu Gly Trp Leu Leu Leu Leu Pro Gly Leu Val Leu
100 105 110

Gly Ser Thr Thr Tyr Glu Ser Ala Arg Leu Ser Ala Val Ser Thr Cys
115 120 125

Val Ser Val Ser Gly Gly Gly Gly Arg Cys Leu Ser His Ile Pro
130 135 140

Ser Thr Ser His Pro Ser His Ser Ala Ala Thr Ala Gln Ile Gly Leu
145 150 155 160

Leu Val Glu Arg Met Gly Lys Cys Leu Thr His Pro Gly Pro Leu Arg
165 170 175

Val Ala Asn

<210> 121
 <211> 233
 <212> PRT
 <213> Homo sapiens

<400> 121

Lys Ser His Thr Ala Leu Leu Pro Tyr Ser His Val Arg Ser Lys Leu
 1 5 10 15
 Ile Arg Ser Ala Leu Arg Gly Asn Ala Pro Pro Thr Glu Arg Asn Ile
 20 25 30
 Lys Tyr Phe Val Asp Ile Phe Leu Thr Pro Pro Pro Val Ser Tyr Gln
 35 40 45
 Ile Asn Ser Ser Lys Cys Leu Asn Thr His Lys Thr Arg His Phe Leu
 50 55 60
 Tyr Ala Ser Val Val Phe Leu His Leu Lys Cys Ile Met Ser Ile Lys
 65 70 75 80
 Asn Leu Tyr Glu Val Ala Tyr Ile Glu Ser Val Tyr Ile Gln Cys Gln
 85 90 95
 Ser Ser Val Ser Ser Ile Ser Phe Arg Ser Arg Lys Lys Thr Val Pro
 100 105 110
 Asp Ile Tyr Ile Cys Asn Leu Ala Val Ala Asp Leu Val His Ile Val
 115 120 125
 Gly Met Pro Phe Leu Ile His Gln Trp Ala Arg Gly Gly Glu Trp Val
 130 135 140
 Phe Gly Gly Pro Leu Cys Thr Ile Ile Thr Ser Leu Asp Thr Cys Asn
 145 150 155 160
 Gln Phe Ala Cys Ser Ala Ile Met Thr Val Met Ser Val Asp Arg Val
 165 170 175
 Lys Asp Phe Glu Ile Ser Tyr Asn Ser Glu Val Pro Val Leu Pro Gln
 180 185 190
 Ala His Ser Asn Ser Asn Thr Ser Phe Gly Leu Gln Gln Arg Phe Ser
 195 200 205
 Ser Phe Val Ser Leu Asn Leu Leu Lys Asn Ile Leu Phe Asn Phe Thr
 210 215 220
 Glu Glu Tyr Phe Trp Lys Thr Asn Thr
 225 230

<210> 122
 <211> 223
 <212> PRT
 <213> Homo sapiens

<400> 122

Leu Thr Glu Gly Leu Glu Tyr Ile Ser Lys Tyr Arg Tyr Lys Asn Lys
 1 5 10 15
 Phe Leu Leu Leu Gly Ile Tyr His Asn Gly Phe Gln Leu Ser His Leu
 20 25 30
 Ile Ile Arg Asn Lys Ser Ser His Leu Gly Ala Ile Ile Ser Leu Tyr
 35 40 45
 Ile Thr Glu Val Trp Asn Arg Thr Gln Ser Leu Pro Asp Phe Leu Ile
 50 55 60
 Leu Ser Leu Met Gln Thr Gln Thr Val Asn Met Tyr Leu Pro Ser Ala
 65 70 75 80
 Lys Leu Pro Asn Ser Trp Leu Val Ser Gly Lys Arg Gln Ser Cys Phe
 85 90 95
 Ser Phe Cys Leu Ser Tyr Asn Leu Glu Thr Leu Lys Lys Leu Ser Ala
 100 105 110
 Tyr Pro Val Ser Arg Ile Leu Gln Asn Leu Gln Gly Asn Thr Leu Thr
 115 120 125
 Glu Leu Phe Leu Leu Phe Leu Ile Leu Pro Leu Met Ala Leu Val Val
 130 135 140
 Val Tyr Gly His Val Ala Lys Lys Leu Trp Ile His Asn Ala Val Asp
 145 150 155 160
 Asp Ile Ser Ile His Thr Tyr Ile Trp Gln His Gly Glu Lys Lys Glu
 165 170 175
 Thr Leu Lys Met Leu Met Thr Met Val Leu Val Tyr Thr Ile Ser Trp
 180 185 190
 Leu Pro Leu Asn Leu Tyr Leu Val Leu Pro Cys Arg Glu Phe Ile Ser
 195 200 205
 Ser His Asn Gly Leu Cys Phe Phe Phe His Trp Leu Ala Ile Ser
 210 215 220

<210> 123

<211> 195

<212> PRT

<213> Homo sapiens

<400> 123

Phe Ile Thr Ala Gln Glu Val Glu Thr Ala Pro Ser Arg Ile Lys Ile
 1 5 10 15
 Tyr Tyr Ile Lys Pro Asn Lys Arg Asp Tyr Arg His His Ile Ser Ile
 20 25 30
 Gln Pro Lys Ser Ser Ser Cys Ser Gln Ile Lys Lys Lys Asn Ser Lys
 35 40 45

Cys Leu Thr Met Asp Asp Tyr Ser Arg Arg Ala Val Glu Gly Cys Leu
 50 55 60
 Ser Ser Ser Ala Gln Thr Ser Asp Arg Ala Thr Asn Thr Ala Ser Pro
 65 70 75 80
 Pro Ala Glu Val Glu Val Gln Ala Met Arg Gly Gly Gly Gln Gly Tyr
 85 90 95
 Phe Leu Ala Leu Ser His Pro Thr Leu Met Pro Val Pro Ala Leu Ser
 100 105 110
 Thr Leu Glu Ser Tyr Ala Ile Gln Gly Val Asp Glu Val Phe Asn Gln
 115 120 125
 Glu Lys Ile Leu Pro Cys Pro Pro Ile Glu Glu Ile Glu Asn Glu Ala
 130 135 140
 Ile Val Gly Val Ile Ser Asn Phe Trp Thr Ser Ala Cys Thr Leu Gly
 145 150 155 160
 Val Glu Val Glu Lys Asn Tyr Lys Lys Thr Glu Arg Ser Gly Gly Asp
 165 170 175
 Leu Gly Leu Asp Glu Ile Val Tyr Ile Lys Gly Glu Asn Leu Ile Thr
 180 185 190
 Leu Pro Leu
 195

<210> 124
 <211> 188
 <212> PRT
 <213> Homo sapiens

<400> 124

Phe Met Thr Leu Lys His Leu Ala Asn Leu Ile Ser Asp Leu His Asn
 1 5 10 15
 Leu Val Met Phe Leu Ser Ile Leu Phe Glu Ala Val Phe Ile Ser Gln
 20 25 30
 Arg Leu Leu Lys Leu His Lys Leu Lys Gly Ile Thr Val Phe Ile Leu
 35 40 45
 Leu Ser Arg Tyr Leu Ser Val Tyr Phe Cys Leu Ser Gln Leu Ile Thr
 50 55 60
 Ala Leu Leu His Lys His Tyr Pro Gln Tyr Ile Tyr Ser Tyr Thr Glu
 65 70 75 80
 Arg Gln Lys Lys Ile Thr Ala Val Ile Ala Arg Phe Phe Ile Cys Gln
 85 90 95
 Phe Leu Ser Phe Leu Ile Gly Leu Leu Ala Leu Gly Trp Ser Pro Trp
 100 105 110

Lys Ser Arg Ala Arg Lys Gly Val Ser Gly Ala Ser Cys Phe Ser Gln
 115 120 125
 Gly Ala Gln Ala Leu Arg Ala Ser Ile Ser Ala Phe Asn Thr Asp Phe
 130 135 140
 Pro His Ser Leu Ile Lys Val Leu Leu Glu Phe Leu Met Pro Asn Ser
 145 150 155 160
 Gln Tyr Phe Trp Phe Leu Asn Phe Ile Lys Gly Asn Leu Pro Gly Ala
 165 170 175
 Arg Arg Lys Ile Asp Ser Pro Arg Arg Arg Arg Glu
 180 185

<210> 125
 <211> 172
 <212> PRT
 <213> Homo sapiens

<400> 125

Phe His Tyr Arg Ala Tyr Leu Asn Gly Phe Glu Gly Gln Asn Gln Val
 1 5 10 15
 Met Trp Val Asp Glu Pro Gln Gly Ile Gln Glu Glu Gly Gln Leu His
 20 25 30
 Leu His Leu Leu Val Ile Arg Gln Ser Ser Ile Gln Glu Ser Ser Gly
 35 40 45
 Ser Gln Asn Leu Asn Gly Ser Phe Val Gln Tyr Ala Phe Val Ser Phe
 50 55 60
 Lys Ile Glu Val Ser Lys Val Leu Ala Gly Gln Asn Val Cys Phe Ile
 65 70 75 80
 Leu Tyr Ser Leu Leu Trp Val Val Val Ile His Leu Phe Ile Phe Ala
 85 90 95
 Phe Cys Ser Ser Phe Pro Pro Ser Ile His Leu Ser Ile Tyr Leu Leu
 100 105 110
 Ile Tyr Pro Glu Ile Phe Ile Glu Cys Tyr Leu Cys Ala Gly Ser Tyr
 115 120 125
 Ser Arg Cys Ser Leu Asn Pro Cys Ile Asn Glu Ala Ser Thr Lys Leu
 130 135 140
 His Pro Tyr Ile Ala Met Tyr Ile Asp Met Ser Gly Ile Gln Asn Thr
 145 150 155 160
 Glu Tyr Leu Tyr Lys Leu His Ser Asp Phe Thr Thr
 165 170

<210> 126
 <211> 89
 <212> PRT
 <213> Homo sapiens

<400> 126

Arg Arg Val Cys Gly Glu Arg Gly Ser Gly Trp Pro Arg Gln His Val
 1 5 10 15
 Ser Ser Thr His Arg Leu Trp Asp Asp Asp Pro His Phe Met Tyr Phe
 20 25 30
 Pro Arg Ile Glu Lys Tyr Gly Ile Ile Leu Gln Leu Ile Val Trp Leu
 35 40 45
 Ile Thr Gln Arg Leu Leu Gln Pro Leu Ser Pro His Gln Thr Arg Thr
 50 55 60
 Val Lys Glu Asn Lys Thr Thr Thr Cys His Gly Asn Thr His Leu Tyr
 65 70 75 80
 Thr Tyr Ile Ile Phe Lys Asn Leu Ala
 85

<210> 127

<211> 201

<212> PRT

<213> Homo sapiens

<400> 127

Leu Ser Gly Phe Leu Trp Phe Leu Val Leu Gly Leu Pro Thr Leu Ser
 1 5 10 15
 Lys Cys Ile Gly Leu Tyr Leu Tyr Leu Thr Phe Phe Met Leu Phe Pro
 20 25 30
 Gly Val Val Trp Ile Phe Cys Phe Ile Gln Leu Leu Gln Asn Leu Cys
 35 40 45
 His Gly Asn Ile Gln Arg Leu Phe Arg His Ser Val Arg Ala Ser Thr
 50 55 60
 Asp Lys Pro Ser Gly Tyr Ile Gln Thr Met Lys Pro Thr Val Ser Ser
 65 70 75 80
 Gly Ser Asp Val Ile Leu His Leu Thr Val Leu Leu Phe Asn Arg Val
 85 90 95
 His Leu Leu Lys Leu Ser Leu Tyr Arg Ile Cys Asn Gly Ile Asp Glu
 100 105 110
 Ile Asp Ser Gly Asn Ile Gln Leu Ala Val Lys Ser Val Lys Ser Val
 115 120 125
 Leu Cys Ile Ser Gly Phe Cys Ile Lys Phe Arg Leu Lys Ile Gln Cys
 130 135 140
 Ser Trp Asp Val Lys Pro Ala Tyr Met Glu Gly Gln Leu Phe Ile Tyr
 145 150 155 160
 Met Gly Ser Ala Gly Pro Thr Leu Lys Phe Glu Tyr Val Trp Ile Leu

165 170 175
 Val Ser Met Gly Ile Leu Glu Pro Val Pro Gln Gly Ile Leu Glu Gly
 180 185 190
 Gln Leu Tyr Asn Ile Leu Leu Leu Leu
 195 200
 <210> 128
 <211> 177
 <212> PRT
 <213> Homo sapiens
 <400> 128
 Asp Tyr His Ser Tyr Phe Phe Pro Tyr Ile Arg Ala Gln Pro Leu Leu
 1 5 10 15
 Cys Leu Gly Leu Pro Val Ile Ile Val Val Val Ser Phe Ile Val Leu
 20 25 30
 Thr Phe Ser Ser Ser Ser Phe Ile Leu Pro Leu Pro Ser Val Phe Tyr
 35 40 45
 Asp Gln Ile Gln Ser Leu Lys Thr His Arg Ala His Gln Asn Thr Thr
 50 55 60
 Leu Gln Pro Asp Ile Gln Ser Cys Pro Val Tyr Arg Ser Asn Phe Phe
 65 70 75 80
 Ser Ile Tyr Leu Ser Leu Ser Pro His Leu Leu Leu Ile Asn Thr Trp
 85 90 95
 Ile Leu Tyr Ala Gln Glu Ala Lys Leu Phe Thr Val His Phe Arg Cys
 100 105 110
 Pro Ser Tyr Phe Pro Phe Ser Ile Leu Leu Thr Met Leu Phe Pro Met
 115 120 125
 Leu Gly Met Leu Ser Phe Gln His Leu Ser Thr Thr Asn Phe Ala Lys
 130 135 140
 Tyr Arg Pro Pro Gln Asn Pro Ser Phe Ser Leu Gly Leu Pro Gln Gly
 145 150 155 160
 Pro Ser Asp Asn Asn Val Pro Ser Pro Ser Phe Cys Ile Ser Cys Ile
 165 170 175

His

<210> 129
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 129

Met Thr Phe Ser Gly Tyr Ala Gln Asn Lys His Phe Arg Tyr Phe Leu

<400> 130

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gln | Gln | Val | Arg | Arg | Gln | Pro | Leu | Ser | Phe | Leu | Gly | Leu | Val | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Gln | Pro | Leu | Ser | Leu | Gln | Gly | Val | Pro | Arg | Gln | Pro | Arg | Gln | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Met | Ala | Gln | Phe | Leu | Ser | Val | Phe | Ser | Gly | Lys | Leu | Asp | Trp | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asn | Arg | Thr | Glu | Thr | Pro | Gly | Gln | Val | Asn | Met | Ser | His | Thr | Gly | Gly |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Trp | Leu | Val | Gly | Lys | Gln | Val | Val | Phe | Ile | Leu | Thr | Val | Leu | Val |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |

Ala Phe Cys Gly Leu Val Gly Asn Gly Val Val Cys Trp Leu Phe Cys
 85 90 95

Phe Gln Val Arg Ser Ser Pro Tyr Val Thr Tyr Val Leu Asn Leu Ala
 100 105 110

Ala Ala Asp Met Val Asn Leu Ser Cys Val Thr Val Ile Leu Leu Glu
 115 120 125

Lys Ile Leu Met Leu Tyr His Gln Val Thr Leu Gln Val Ala Met Phe
 130 135 140

Leu Glu Pro Val Ser Tyr Phe Ser Asp Thr Val Ser Leu Cys Leu Leu
 145 150 155 160

Val Ala Met Asn Ile Glu Ser Phe Leu Cys Val Leu Cys Pro Thr Trp
 165 170 175

Cys Cys His Arg Pro Lys His Thr Ser Ala Val Met Ser Ile Leu Ser
 180 185 190

Trp Ala Leu Ala Leu Ser Phe Ala Cys Gly Pro Gly Leu Val Met Gly
 195 200 205

Glu Gly Pro Gly Met Pro Ile Ser Gly Arg Leu Tyr Asn Ile Ser His
 210 215 220

Ala
 225

<210> 131
 <211> 194
 <212> PRT
 <213> Homo sapiens

<400> 131

Cys Tyr Ile Thr Glu Gln Ser Gly Thr Trp Lys Cys Arg Lys Asp Met
 1 5 10 15

Ala Glu Thr Val Ser Ala Phe Glu Gly Phe His Tyr Ser Pro Gly Gly
 20 25 30

Lys Met Trp Gly Asp Cys Leu Asn Thr Glu His Pro Val Thr Leu Glu
 35 40 45

Phe Trp Ile Asp Thr Asp Phe Phe Phe Leu Glu Ser Lys Tyr Val Ser
 50 55 60

Asp Ile Ala Trp Gly Ile Leu Ile Leu Lys Thr Ile Cys Val Val Asn
 65 70 75 80

Leu Lys Phe Arg Phe His Trp Val Ser Cys Met Phe Met Cys Ser Ile
 85 90 95

Arg Gln Asp Phe Met Gly Lys Ile Lys Leu Ile Ser Tyr Thr Leu Phe
 100 105 110

Leu Phe Leu Asp Pro Arg Ser Ser Leu Cys Ser Pro Phe Leu Leu Leu
 115 120 125

Tyr Leu Leu Leu Gly Pro Ser Pro Cys Cys Val His Ser Phe Gln
 130 135 140

Asp Met Gln Thr Trp Asp Thr Ala Val Gly Ser Arg Ala Met Tyr Gln
 145 150 155 160

Ala Ala Gln Gln Ser Val Lys His Phe Pro Phe Ser Leu Gly Ala Gln
 165 170 175

Pro Trp Gly Val Pro Cys Asn Ala Arg Gly Leu Asp Ala Ser Cys Gly
 180 185 190

Asn Thr

<210> 132
 <211> 163
 <212> PRT
 <213> Homo sapiens

<400> 132

Gly Glu Trp Cys Leu Val Phe Glu Lys Asn Ser Lys Ser Tyr His Trp
 1 5 10 15

Phe Lys Asn Cys Phe Phe Tyr Cys Phe Val His Asp Tyr Leu Glu Gly
 20 25 30

Ile Trp Lys Ser Asp Ala Lys Arg Thr Gly Ser Phe Pro Phe Lys Ala
 35 40 45

Met Asp Asn Ile Pro Leu Met Lys Met Tyr Ser Cys Ile Gln Ile Cys
 50 55 60

Arg Met Val Phe Thr Gln Tyr His Thr Lys His Leu Cys Asn Val Gly
 65 70 75 80

Gln Thr Cys Ala Glu His Leu Ala Gln Val Leu Cys Lys Ser Lys Lys
 85 90 95

Lys His Trp Met Phe Leu Phe His Leu Lys Glu Ile Lys Ala Thr Val
 100 105 110

Leu Tyr Ala Gln Asn Leu Cys Val Ile Asp Arg Leu Thr Ile Gln Ile
 115 120 125

Phe Pro Leu Gly Ile Asn Val Lys Ile Met Gln Asn Cys Asn Lys Asn
 130 135 140

Phe Lys Met Leu Leu Gly Leu Val Tyr Leu Arg Leu Val Leu Val Phe
 145 150 155 160

Cys Thr Asn

<210> 133

<211> 152
 <212> PRT
 <213> Homo sapiens

<400> 133

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Leu Phe Leu Phe Tyr Phe Ser Phe Thr Ser Asn Ile Leu Cys Phe Leu
1      5      10      15
Glu Ala Asn Tyr Phe Lys Cys Phe Cys His Pro Leu His Ile Leu Tyr
      20      25      30
Lys Ile Glu Asp Lys Ile Ser Asn Tyr Asn Ala Arg Trp Ile Leu Asn
      35      40      45
Val Cys Tyr Ser Phe Thr Ile Leu Phe Ser Leu Tyr Met Asn Ile Leu
      50      55      60
Ile Gln His Lys Phe Phe Thr Phe Ile Thr Trp Pro Arg Lys Phe Val
65      70      75      80
Leu Lys Ser Leu Val Gln Ile Leu Ile Tyr Asn Lys Thr Tyr Ile Ile
      85      90      95
Phe Pro Asn Tyr Tyr Asn Lys Phe Ser Ile Lys Phe Leu Tyr Lys Asp
      100      105      110
Asn Tyr Leu Ser Ile Lys Tyr Ser Lys Gln Ile Glu Lys Ser Tyr Lys
      115      120      125
Val Ala His Phe Leu Cys Phe Pro Phe Val Phe Val Leu Leu Cys Phe
      130      135      140
Val Phe Asp Gly Val Leu Leu Leu
145      150

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<210> 134
 <211> 165
 <212> PRT
 <213> Homo sapiens

<400> 134

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Ile Asn Val Ala Asn Asn Lys Asn Leu Phe Cys Ser Ser Ser Gly Gly
1      5      10      15
Glu Val Arg Lys Ile Lys Ala Ser Ala Asp Gly Ser Pro Arg Ser Arg
      20      25      30
Glu Glu Phe Phe Ile Phe Ser Leu Leu Val Ala Pro Ser Asn Leu
      35      40      45
Gly Ile Pro Trp Phe Val Ala Ala Ser Leu Gln Phe Leu Pro Ser Ser
      50      55      60
Phe His Glu Leu Ile Ser Cys Val Cys Leu Cys Ile Ser Ser Leu Phe
65      70      75      80
Met Gly Cys Gln Leu Leu Asp Leu Arg Pro Thr Leu Thr Gln Tyr Glu

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85 90 95
 Leu Ile Leu Thr Leu His Leu Gln Arg Pro Tyr Leu Gln Ile Arg Ser
 100 105 110
 Pro Ser Glu Val Leu Gly Arg His Thr Phe Trp Gly Asp Thr Ile Gln
 115 120 125
 Leu Ile Thr Pro Gln Leu Pro Lys Leu Glu Arg Ala Asn Thr Glu Asn
 130 135 140
 His Arg Leu Gln Gly Ala Glu Ala Ser Lys Cys Asn Thr Lys His Leu
 145 150 155 160
 Asn Asn Asn His Ile
 165

 <210> 135
 <211> 215
 <212> PRT
 <213> Homo sapiens

 <400> 135

 Gly Gln Ser Lys Thr Pro Ser Gln Asn Ser Asn Lys Pro Ile Gln Ser
 1 5 10 15
 Lys Asn Ile Ala Phe Ile Thr Val Tyr Ser Asn Ser Leu His Leu Pro
 20 25 30
 Val Lys Phe Cys Tyr Phe Pro Tyr Lys Phe Ser Ala Phe Leu Val Lys
 35 40 45
 Ile His His Arg Tyr Leu Ile Ala Phe Cys Cys Gly Met Met Met Met
 50 55 60
 Thr Lys Asn Gly Ile Cys Ser Phe Leu Ser Leu Lys Phe Leu Ser Ile
 65 70 75 80
 Tyr Arg Lys Val Met Gly Phe Phe Ile Phe Thr Ser Ile Trp Phe Arg
 85 90 95
 Cys Ala Phe Ile Asn Ser Glu Phe Glu Leu Ile Leu Ile Val Phe Tyr
 100 105 110
 Asn His Thr Ile Lys Leu Tyr Cys Leu Leu Leu Ser Asn Ser Asn Tyr
 115 120 125
 Ser Glu Gln Thr Ser Leu Thr Tyr Leu Phe Cys Glu Cys Ser Phe Leu
 130 135 140
 Leu Ala Arg Lys Met Asp Val Cys Ser Ile Asn Ile Leu Ile Glu Tyr
 145 150 155 160
 Met Ile Thr Cys Ser Ser Leu Gly Glu Ser Leu Phe Leu Ile Leu Ser
 165 170 175
 Phe Phe Phe Phe Thr Arg Met Ser Phe Lys His Phe Gly Thr Tyr Leu
 180 185 190

Arg Tyr Phe Phe Phe Lys Val Phe Tyr Ile Ile Leu Glu Phe Leu Asp
 195 200 205

Tyr Thr Leu Phe His Pro Cys
 210 215

<210> 136

<211> 206

<212> PRT

<213> Homo sapiens

<400> 136

Val Tyr Leu Pro Leu Ser Phe Leu Thr Cys Pro Leu Cys Leu Ile Val
 1 5 10 15

Gln Ile Leu Arg Ser Ser Gly Asn Pro Gly Pro Trp Arg Leu Pro Ser
 20 25 30

Pro Phe Phe Pro Ala Ser Cys Pro Pro Leu Pro Ile Phe Pro Glu His
 35 40 45

Thr Trp Ser Pro Gln Asp Ser Ala Pro Val Tyr Ser Val Phe His Val
 50 55 60

Cys Ser Pro Leu Phe Ser Leu Leu Gly Lys Leu Leu Asn Ile Ser Gln
 65 70 75 80

Asp Arg Val Leu Ile Ser Leu Arg Met Leu Ser Leu Ala Thr Leu Asn
 85 90 95

Val Leu Arg Ala Leu Gly Ser Tyr Leu Cys Glu Ile Thr Ser Leu Thr
 100 105 110

Leu His Ile Phe Met Asp Pro Phe Phe Leu Leu Ile Cys Trp Leu Asp
 115 120 125

Lys Gly Arg His Tyr Ile His Leu Leu His Leu Trp Ile Ala Arg Val
 130 135 140

Gly Ala His Met Phe Leu Leu Asn Val Leu Phe Ile Gln Gly Ala His
 145 150 155 160

Val Gln Val Cys Tyr Ile Gly Ile Leu Cys Asp Ala Glu Val Trp Ala
 165 170 175

Ser Trp Asp Leu Ile Ala Gln Leu Val Ser Ile Val Pro Glu Arg Phe
 180 185 190

Phe Asn Pro Gly Pro Leu Pro Ser Ile Asn Ile Ser Val Thr
 195 200 205

<210> 137

<211> 234

<212> PRT

<213> Homo sapiens

<400> 137

Tyr Thr Tyr Leu Tyr Ile Asn Ile Ile Phe Ile Tyr Ile Tyr Ile Gln
 1 5 10 15
 Ile Phe Ile Asn Lys Tyr Val Phe Ile Ile Tyr Leu Tyr Lys Tyr Ile
 20 25 30
 Phe Ile Tyr Leu Tyr Lys Tyr Leu Tyr Lys Tyr Ile Phe Ile Tyr Leu
 35 40 45
 Tyr Lys Tyr Val Tyr Lys Asn Ile Asn Ile Phe Ile Ile Tyr Leu Tyr
 50 55 60
 Lys Tyr Ile Tyr Ile Lys Ile Tyr Leu Tyr Lys Tyr Ile Tyr Ile Lys
 65 70 75 80
 Ile Tyr Leu Tyr Ile Ile Tyr Leu Tyr Ile Phe Ile Tyr Ile Asn Thr
 85 90 95
 His Ile His Ala Met Gly Cys Thr Tyr Phe Leu Gly Ser Cys Tyr His
 100 105 110
 His Phe Cys Tyr Arg Ser Val Gln Leu Pro Leu Leu Met Asp Ser Phe
 115 120 125
 Ile Gly Tyr Ala Phe Ser Met Val Leu Leu Lys Pro Gly Leu Ser Asn
 130 135 140
 Ser Val Ser Tyr Leu Asn Ala Glu Lys Lys Arg Thr Ile Thr Leu Ile
 145 150 155 160
 Pro Ser Val Cys Ile Ile Phe Val Leu Cys Leu Ile Pro Arg Ser Val
 165 170 175
 Phe Leu Phe Leu Ser Phe Pro His Ile Lys Asn Cys Tyr Val Ser Pro
 180 185 190
 Leu Leu Ser Leu Leu Asn Pro Ile Trp Leu Trp Phe Lys His His Gln
 195 200 205
 Arg Ile His Ala Ile Glu Ala His Gly Glu Pro Gln Val Gln Tyr Cys
 210 215 220
 Leu Ile Ser Gln Asn Leu Cys Val Asn Lys
 225 230

<210> 138
 <211> 203
 <212> PRT
 <213> Homo sapiens

<400> 138

Phe Ser Thr Pro Thr Leu Thr Ile Val Thr Ile Phe Ile Val Ser Trp
 1 5 10 15
 Val Asn Asp Ile Ser Ser Ser Val Ser Ser Ala Phe Met Lys Arg Pro
 20 25 30

Ala Val Asn Phe Ser Ser Gly Phe Val Leu Thr Ser Leu Arg Asn Leu
 35 40 45

Glu Ile Glu Ala Lys Phe Lys Leu Thr Ile Lys Leu Lys Leu Cys Gln
 50 55 60

Phe His Phe Lys Trp Ser Pro His His Leu Phe Cys His Tyr Phe Asn
 65 70 75 80

Leu Ser His His His Leu Pro Ser Gly Ile His Leu Thr Gly Leu Leu
 85 90 95

Phe Cys Phe Leu Cys Cys Pro Ile Tyr Ser Ser His Ser Ser Arg Glu
 100 105 110

Leu Leu Lys Ile Ser Leu Leu Cys His Ser His Leu Arg Asn Ser Phe
 115 120 125

Val Ser His Cys Thr Tyr Gly Thr Ile Pro Asn Ser Phe Tyr Asn Leu
 130 135 140

Arg Asp Pro Ala Ser His Cys Cys Pro Ile Trp Pro Thr Ser Phe Gln
 145 150 155 160

Asp Ile Leu Leu His Val His Ala Ala Ala Ala Leu Ala Leu Phe Gln
 165 170 175

Phe Leu Lys Gln Ala Gly Leu Phe Pro Ala Ser Glu Pro Ser Asn Met
 180 185 190

Ala Thr Phe Leu Cys Leu Glu Cys Cys Tyr Thr
 195 200

<210> 139
 <211> 132
 <212> PRT
 <213> Homo sapiens

<400> 139

Phe Ser Trp Leu Met Leu Thr Leu Val Leu Ser Pro Thr Phe Phe Pro
 1 5 10 15

Thr Ser Cys Ser His Gln Gly Pro Lys Glu Lys Ile Leu Pro Thr Leu
 20 25 30

Val Ala Leu Val Leu Val Pro His Met Val Leu Pro Cys Ala Phe Lys
 35 40 45

Val Pro Ser Leu Ala Leu Arg Arg Asp Gly Ile Leu Ala Leu Ser Phe
 50 55 60

Cys His Leu Cys Met Glu Thr Gln Val Leu Thr Cys Leu Gly Arg Val
 65 70 75 80

Ser Pro Gly Arg Leu Gly Ser Ser Pro Ala Leu Gly Asp Ser Gly Thr
 85 90 95

Trp Leu Ala Ala Thr Gln Ala His Trp Pro Ser Gly Ser His Ser Gln

100 105 110
 Ser Pro Ser Gln Val Pro Ala Thr His Ala His Ser Ser Ser Leu Pro
 115 120 125
 Phe Cys Ile Val
 130
 <210> 140
 <211> 203
 <212> PRT
 <213> Homo sapiens
 <400> 140
 Ala Arg Pro Gln Thr His Gln Lys Glu Glu Thr Pro Asp Pro Ser Glu
 1 5 10 15
 His Leu Lys Glu Gln Thr Pro Asp Thr Pro Ser Leu Arg Thr Val Thr
 20 25 30
 Leu Thr Ala Arg Val His Gly Phe Ile Leu Glu Val Ser Glu Thr Lys
 35 40 45
 Asn Pro Pro Glu Gly Thr Asn Ser Gly His Ser Ser Thr Ser Leu Lys
 50 55 60
 Asp Cys Leu Val Ser Asn Asn Pro Cys Lys Ala Ser Met Ala Asp Arg
 65 70 75 80
 Arg Ile Phe Asn Lys Tyr Leu Gln Leu Leu Ser Ile Asn Gly Ser Ser
 85 90 95
 Gln Ser Arg Glu Glu Lys Gly Thr Gln Ala Cys Gln Pro Ile Trp Val
 100 105 110
 Val Leu Cys Gln Val Gln Gly Ile Leu Ile Lys Glu Leu Arg Gly Arg
 115 120 125
 Arg Leu Cys Arg Glu Lys Met Phe Arg Asn Lys Ser Asp His Phe Gly
 130 135 140
 Lys Gln Thr Lys Lys Leu Thr Trp Ala Leu His Cys Ser Leu Phe Asn
 145 150 155 160
 Ala Met Asn Ile Ser Glu Tyr Glu Phe Asp Leu Lys Lys Ile Asn Ser
 165 170 175
 Gln Val Phe Tyr Gln Asp Leu Arg Thr Thr Met His Leu Thr Ile Gln
 180 185 190
 Leu Asp Val Val Leu Ser Thr Tyr Ile His Lys
 195 200
 <210> 141
 <211> 176
 <212> PRT
 <213> Homo sapiens

<400> 141

Ala Pro Ala Val Gly His Gly Arg Pro Pro Leu Val Arg Pro Arg Gln
 1 5 10 15
 Cys Cys Pro Val Glu Gly Thr Asn Ser Pro Arg Arg Trp Glu Gly Ser
 20 25 30
 Ala Lys Ile Gln Lys Leu Ile Leu Gln Ser Asn Val Val Cys Leu Leu
 35 40 45
 Val Leu Phe Tyr Ile Leu Met Val Phe Ser Ile Cys Arg Glu Leu Cys
 50 55 60
 Ser His His Pro Lys Lys Thr Pro Ala Leu Ile Ser Ser His Ser Ser
 65 70 75 80
 His Trp Pro Pro Ala Leu Gly Asn His Ser Thr Phe Gln His Cys Glu
 85 90 95
 Val Ile Asn Ser Gly His Phe Ile Tyr Met Glu Leu Tyr Asn Met Trp
 100 105 110
 Pro Phe Val Thr Gly Phe Phe Leu Leu Cys Tyr Met Leu Leu Ser Thr
 115 120 125
 Ile Ser Glu Gln Leu Leu Arg Ser Ile Ile Cys Thr Leu Glu Cys Asn
 130 135 140
 Ile Phe Leu Leu Asp Val Glu Trp Tyr Asn Glu Ser Val Tyr Ala Cys
 145 150 155 160
 Glu Ile Leu Leu Lys His Ser Gln Lys Cys Asp Arg His Met Cys Ile
 165 170 175

<210> 142

<211> 183

<212> PRT

<213> Homo sapiens

<400> 142

Glu Thr Ser Ser Arg His Gln Gly Val Leu Met Tyr Trp Pro Leu Ile
 1 5 10 15
 Gln Leu Ile Leu Met Ala Thr Lys Ser Lys Trp Pro Pro Val Thr Val
 20 25 30
 Ser Leu His Arg Cys Arg Gly Lys Glu Gln Cys Arg Arg Met Arg Pro
 35 40 45
 Ala Trp Tyr Ser Pro Glu Ala Arg Glu Pro Ala Cys Glu Gly Gly Asp
 50 55 60
 Ser His Cys Leu Leu Pro His Val Gly Ser Ser Gly Arg Pro Met Lys
 65 70 75 80
 Arg Gly Pro Gly Trp Ile Met Ala Arg Arg Leu Phe Arg Ala Glu Arg
 85 90 95

Cys Gln Pro His Arg Ser Glu Lys Glu Thr Gly Val Asn Val Met Gln
100 105 110

Cys Leu Glu Cys Cys Asp Gly Glu Pro Ala Val Glu Ala Leu Gly Phe
115 120 125

Cys Cys Cys Cys Trp Val Ser Phe Cys Phe Tyr Phe Phe Asn Glu Asp
130 135 140

Phe Arg Arg Phe Gln Leu Ser Leu Met Lys Thr Arg Cys Val Gly Ser
145 150 155 160

Trp Val Leu Leu Pro Ala Ala Ala Gly Val Trp Pro Leu Ser Gln Arg
165 170 175

Ala Leu Val Ile Thr Pro Leu
180

<210> 143

<211> 207

<212> PRT

<213> Homo sapiens

<400> 143

Leu Trp Tyr Lys Phe Ala Phe Arg Phe Leu Asp Tyr Arg Ile Leu Phe
1 5 10 15

Gln Arg Leu Lys Met Lys Lys Lys Leu Thr Ile Phe Ser Tyr Ile Glu
20 25 30

Cys Ser Lys Ala His Asp Lys Ile Lys Ser Leu Tyr Asn Thr Glu Cys
35 40 45

Ser Phe Leu Ile Cys Met His Cys Phe Ile Phe Phe Leu Phe Cys Leu
50 55 60

Leu Pro Asn Ile Thr Asn Lys Asn Ala Ile Phe Phe Lys Lys Lys Asp
65 70 75 80

Cys Leu Cys Ser Tyr Gly Cys Met Tyr Phe His Arg Leu Tyr Ile Phe
85 90 95

Asn Leu Arg Glu Phe Val Leu Ile Phe Leu Ser Ile Phe Asn Ser Lys
100 105 110

Leu Ala Ser His Leu Asn Arg Asn Arg Tyr Pro Arg Glu Met Leu Phe
115 120 125

His Glu Val Ser Gly Phe Ser Leu Glu Asp Gln Val Pro Phe Tyr Pro
130 135 140

Leu Leu Arg Lys Met Arg Val Asp Thr Ile Val Gln Gln Ala Arg Tyr
145 150 155 160

Thr Ser Ala Leu Gly Phe Ser Pro Glu Leu Arg Asn Ala His Phe Leu
165 170 175

Val Val Phe Leu Lys Ile Ile Ile Ile Val Leu Ile Phe Thr Val Cys
180 185 190

Ile Glu His Ile Phe Gly Val Thr His Gly Lys Cys Tyr Phe Val
195 200 205

<210> 144
<211> 160
<212> PRT
<213> Homo sapiens

<400> 144

Arg Gly Gln Glu Leu Thr Ser Pro Gln Thr Trp Ser Asn Leu Ala Gln
1 5 10 15

Glu Asp Val Cys Ile Pro Arg Arg Ile Gln Cys Glu Val Ser Ile Glu
20 25 30

Gly Glu Val Thr Ala Asp Phe Glu Gly Ile Leu Met Lys Phe Leu Ser
35 40 45

Lys Glu Lys Ile Leu Ala Asp Arg Gln Gln Ser Ile Leu Gln Thr Ile
50 55 60

Phe Trp Gly Phe Asp Glu Ser Ile Leu Ser Ala Lys His Pro Tyr Cys
65 70 75 80

Lys Cys Gln Thr Val Ser Ile Gly Ser Thr Gln Ser Arg His Leu Lys
85 90 95

Leu Trp Met Leu Glu Phe Thr Ala Leu Leu Ile Leu Ser Lys His Thr
100 105 110

Ala Ser Asn Ile Cys Leu Arg Leu Tyr His Lys Arg Gln Asp Lys Phe
115 120 125

Ile Gly His Cys Ser Gln Asn Ile Ser Leu Pro Lys Leu Asn Tyr Val
130 135 140

Ser Gln Glu Ile Glu Ser Asp Pro Leu Val Leu Ala Phe Cys Arg Thr
145 150 155 160

<210> 145
<211> 215
<212> PRT
<213> Homo sapiens

<400> 145

Glu Asp Lys Lys Tyr Glu Asn Phe Asn Ile Ala Asn Met Tyr Leu Ile
1 5 10 15

Leu Leu Lys Leu Leu Phe His Val Phe Gln Lys Ile Tyr Ile Ser Arg
20 25 30

Ile Ala His Ile Glu Ile Ala Val Ile Ile Arg Ala Gln Thr Pro Glu
35 40 45

Ser Asp Gln Leu Phe Gln Ala Trp Phe Cys His Leu Leu Val Glu Trp
 50 55 60
 Arg Ala Cys His Ser Val Cys Leu Ser Leu Phe Pro Tyr Leu Ser Gly
 65 70 75 80
 Asp Asn Asn Asn Met Tyr Ile Ile Glu Leu Leu Ser Ser Ser Cys Lys
 85 90 95
 Ser Ile Leu Thr Lys Phe Leu Glu Asn Ala Tyr Ser Lys His Ser Ile
 100 105 110
 Thr Tyr Ala Ile Cys Ile Ser Ile Asn Arg Tyr Ile Leu Val Val Tyr
 115 120 125
 Pro Glu Thr Phe Leu Val Cys Ser Leu Leu Pro Phe Phe Phe Pro Glu
 130 135 140
 Lys Thr His Arg Phe Cys Leu Met His Gly Lys Glu Lys Tyr His Gln
 145 150 155 160
 Val Leu Gly Ser Ser Lys Lys Ile Lys Lys Pro Lys Thr Cys Thr Leu
 165 170 175
 Glu Arg Gly Lys Leu Ile Pro Met Glu Lys Lys Lys Lys Arg Asn Leu
 180 185 190
 Asn Asn Cys Ser Ser Glu Gly His Val Gly Leu Gln Arg Gly Phe His
 195 200 205
 Met Pro Phe Leu Ser Arg Gly
 210 215

<210> 146
 <211> 210
 <212> PRT
 <213> Homo sapiens

<400> 146

Glu Phe Thr Cys Gln Lys Val Ser Ile Phe Asn Ile Ile Leu Phe Phe
 1 5 10 15
 Lys Tyr Phe Cys Pro Tyr Trp Asn Phe Val Leu Phe Ser Cys Val Met
 20 25 30
 Ser Leu Phe Val Tyr Val Phe Ile Cys Cys Asn Val Leu Ile Leu Ile
 35 40 45
 Phe His Phe Leu Phe Lys Leu Thr Leu Gly Gly Cys Trp Val Ile Leu
 50 55 60
 Met Phe Ile Ile Ile Tyr Phe Ser Trp Thr Phe Leu Thr Asp Lys His
 65 70 75 80
 Arg Asp Arg Arg Asn Gly Phe Glu Trp Leu Thr Trp Phe Val Gln Asn
 85 90 95
 Leu Phe Leu Leu Leu Leu Gln Lys Arg Thr Ile Leu Glu Ile Gly Leu

100 105 110
 Cys Asp Phe Phe Phe Phe Asp Thr Pro Leu Phe Glu Gly Phe Cys Gly
 115 120 125
 Glu Gly Ser Cys Phe Ser Phe Phe Ser Ser Ser Ser Pro Gln Gly Ile
 130 135 140
 Pro Pro Phe Leu Arg Ile Phe Pro Leu Pro Gly Ser Ser Thr Val Ser
 145 150 155 160
 Arg Leu Ser Pro Thr Cys Ser Arg Arg Thr Ser Leu Gln Ser Tyr Phe
 165 170 175
 Arg Leu Pro Val Gly Asn Ile Ser Ser Gln Val Ser Asp Pro Val Pro
 180 185 190
 Leu Trp Cys Ser Phe Thr Gln Ala Gly Glu Ile Pro Leu Phe Pro Trp
 195 200 205
 Asp Glu
 210

<210> 147
 <211> 168
 <212> PRT
 <213> Homo sapiens

<400> 147

Lys Asn Gln Glu Val Leu Asp Gln His Ile Lys Pro Val Leu Phe Val
 1 5 10 15
 Glu Asp Tyr Thr Phe Val Cys Asp Lys Thr Tyr Leu Ser Glu Leu Ser
 20 25 30
 Gly Trp Ile Asn Leu Leu Ile Pro Ser Ser Ser Phe Asp Val Met Pro
 35 40 45
 Asp Thr Asn Ser Thr Ile Asn Leu Ser Leu Ser Thr Arg Val Thr Leu
 50 55 60
 Ala Phe Phe Met Ser Leu Val Ala Phe Ala Ile Met Leu Gly Asn Ala
 65 70 75 80
 Leu Val Ile Leu Ala Phe Val Val Asp Lys Asn Leu Arg His Arg Ser
 85 90 95
 Ser Tyr Phe Phe Leu Asn Leu Ala Ile Ser Asp Phe Phe Val Gly Lys
 100 105 110
 Leu Tyr Val Phe Ile Asp Ser Leu Phe Arg Phe Phe Ile Ser Lys Ser
 115 120 125
 Leu Lys Ala Phe Val Ile Ser Gly Asp Cys Ile Gln Leu Gly Lys Asn
 130 135 140
 Lys His Lys Lys Phe Lys Tyr Ile Leu Glu Gly Ala Ile Trp His Cys
 145 150 155 160

Lys Gly Met Leu Tyr Ile Cys Lys
165

<210> 148
<211> 177
<212> PRT
<213> Homo sapiens

<400> 148

Lys Ser Lys Ile Gln Asp Asn His Asp Leu Pro Pro Ser Thr Thr Leu
1 5 10 15

Lys Val Ile Leu Cys Leu Leu Ile Leu Leu Asn Thr Met Ser Gln Phe
20 25 30

Asn Val Val His Lys Ala Ile His Asn Leu Asn Ser Ile Leu Ser Leu
35 40 45

His Ser Pro Thr Phe Arg Leu Cys Pro Gly Pro Arg Tyr Pro Phe Ile
50 55 60

Ser Leu Pro Thr Leu His Ile Leu Ser His Pro His Ser Leu Asp Val
65 70 75 80

Leu Phe Asn Leu Ser Ser Pro Ser Ile Cys Thr Ser Cys Gln Thr His
85 90 95

Ile Leu Ser Ser Pro Glu Leu Ile Phe Ile Leu Glu Asp Leu Ile Gln
100 105 110

Val Phe Ser Pro Leu Gly Ala Phe Tyr Lys Pro Ser Phe Leu Cys Ser
115 120 125

Asn Leu Gly Ser Ala Val Pro Ser Ile Leu Ser Ser Thr Ile Ala Ala
130 135 140

Pro Thr Ser Ile Ile Asp Leu Ser Tyr Leu Val Val Ile Asn Cys Met
145 150 155 160

Phe Ile Asn Asn Asp Ser Asn Asp Asn Phe Gly Ile Cys Arg Leu Asn
165 170 175

Ile

<210> 149
<211> 122
<212> PRT
<213> Homo sapiens

<400> 149

Ser Ser Asn Lys Asn Ser Ser Lys Arg Gly Asp Arg Gly Leu Lys Ile
1 5 10 15

Leu Asn Lys Val Gln Thr Leu Leu Val Ile Leu Lys Phe Arg Cys Val
20 25 30

Asn Leu Ser Lys Val Leu Val Ser Pro Asp Lys Cys Glu Val Asn Glu
 35 40 45
 Glu Ser Trp Ala Val Leu Ser Lys Cys Leu Gly Ser Phe Gln Lys Pro
 50 55 60
 Ile Ser Trp Val Lys Cys Ile Asn Val Trp Leu Cys Asp Ile His Phe
 65 70 75 80
 Asn Val Val Asp Ser Phe Gly Gln Arg Ile Leu Ala Phe Pro Ser Leu
 85 90 95
 Tyr Met Tyr Pro Leu Ser Ser Thr Ile Ile Asn Phe Leu Asn Gln Leu
 100 105 110
 Pro Ile Gln Lys Thr Asn Lys Gln Thr Asn
 115 120

<210> 150
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 150

Phe Phe Ser Phe Pro Leu Cys Ser Ser Leu Arg Phe Ile Leu Gly Gln
 1 5 10 15
 Leu Ile Ile Lys His Leu Gln Met Gln Met Tyr Asn Ile Ile Ile Asn
 20 25 30
 Thr Phe Thr Tyr Pro Ala Leu His Leu Thr Cys Thr Phe Ser His Arg
 35 40 45
 Phe Phe Glu His Met Ile Leu Gln Arg Pro Leu Thr Leu Phe Glu Cys
 50 55 60
 Asn Val Phe Ile Ser Asp Thr Ile Tyr Ile Cys Leu Tyr Ile Leu Cys
 65 70 75 80
 Asn Trp Phe Asn Val His His Val Gly Cys Glu Leu Phe Val Phe Leu
 85 90 95
 Trp His Thr Val Thr Thr Ile Val Leu Ile Asp Asp Leu Cys Leu Asn
 100 105 110
 Val Asp Arg Phe Leu Ala Asn Gln Ala Ile Val Tyr Thr Lys His Leu
 115 120 125
 Val Phe Pro Thr Pro His Leu Leu Pro Phe Phe Phe Phe Phe Phe
 130 135 140

<210> 151
 <211> 133
 <212> PRT
 <213> Homo sapiens

<400> 151

Pro Pro Ala Pro Val Ala Val Ser Met Leu Ser Thr Ser Pro Cys Ala
 1 5 10 15
 Ser Ile Leu Gly Leu Cys Leu Cys Ser Gln His Arg Cys Val Leu Ser
 20 25 30
 Thr Ala Glu Ile Arg Thr Phe Thr Ile Pro Pro Ala Ala Ser Gly Ala
 35 40 45
 Pro Leu Cys Ser Gly His Leu Thr Leu Leu Gly Pro Pro His His Cys
 50 55 60
 Thr His His Thr Pro Asn Ser Pro Ala Pro Pro Gly Arg Gly Ser
 65 70 75 80
 Val Pro Glu Ser Tyr Asp Leu Gly Thr Pro Ser Pro Ser Leu Gly Trp
 85 90 95
 Leu Leu Leu Leu Pro Gly Leu Val Leu Gly Ser Thr Thr Tyr Glu Ser
 100 105 110
 Ala Arg Leu Ser Ala Val Ser Thr Cys Val Ser Val Ser Gly Gly Gly
 115 120 125
 Gly Gly Glu Val Ser
 130

<210> 152
 <211> 196
 <212> PRT
 <213> Homo sapiens

<400> 152

Thr Lys Phe Ile Pro Gly Met Leu Thr Lys Asn Phe Ser Arg Lys Ile
 1 5 10 15
 Ile Pro Arg Val Gly Leu Ile Arg Glu Leu Lys Val Gly Arg Asn Lys
 20 25 30
 Val Val Leu Ser Lys Leu Leu Pro Lys Lys Phe Arg Lys Ser Ala Val
 35 40 45
 Lys Gln Met Ser Ala Tyr Phe Leu Phe Gln Lys Met Asn Glu Ala Leu
 50 55 60
 Asp Ser His Ile Leu Ser Phe Ala Val Phe Gln Asp Ala Val Leu Phe
 65 70 75 80
 Phe Ile Gly Met Leu Ile Gln Lys Phe Val Trp Glu Asn Ser Gln Lys
 85 90 95
 Thr Leu Phe Val Glu Phe Leu Phe Ile Ser Lys Lys Val Leu Leu Ser
 100 105 110
 Val Val Phe Ile Gln His Leu Ile Phe Ile His Cys Phe Ser Cys Thr
 115 120 125

Gly Gly Asn Lys Glu Arg Met Gly Leu Val Asp Leu Ser Leu His Ser
 130 135 140
 Lys Arg Gly Asn Thr Ile Arg Tyr Ser Ser Ile Leu Tyr Val Asp Ile
 145 150 155 160
 Cys Asn Cys Cys Val Tyr Val Ser Leu Leu Glu Asn Ile Phe Leu Gln
 165 170 175
 Leu Ser Tyr Trp Val Thr Lys Phe Thr Pro Leu Asn Tyr Glu Lys Ser
 180 185 190
 Leu Pro Phe Tyr
 195

<210> 153
 <211> 150
 <212> PRT
 <213> Homo sapiens

<400> 153

Ile Ile Tyr Leu Leu Tyr His Leu Ile Phe Asn Trp Ser Val Ser Val
 1 5 10 15
 Leu Phe Ser Pro His Leu Phe Pro Leu Met Tyr Asn Gly Ser Leu Leu
 20 25 30
 Thr Asp Ile Lys Phe Thr Tyr Ser Phe Leu Cys Tyr Leu Phe Leu Leu
 35 40 45
 Asp Leu Cys His Val Tyr Ser Leu Lys Leu Leu Val Pro Ile Met Tyr
 50 55 60
 Ile Ser Val Ile Lys Leu Pro Phe Cys Ser Phe Tyr Phe Leu Cys Leu
 65 70 75 80
 Ile Arg Phe Tyr Ile Ser Leu Leu Ile Thr Gly Ile Phe Cys Phe Thr
 85 90 95
 Phe Phe Arg Ile Ile Ile Gly Ala Val Phe Lys Ile Ile Ala Cys Phe
 100 105 110
 Gln Asp Leu Phe His Leu Gly Thr Asp Leu Val Phe Cys Phe Leu Lys
 115 120 125
 Cys Leu Pro Phe Phe Tyr Met Ser Arg Asn Phe Glu Leu Tyr Ser Glu
 130 135 140
 His Ser Asn Tyr Val Val
 145 150

<210> 154
 <211> 188
 <212> PRT
 <213> Homo sapiens

<400> 154

His Cys Ile Pro Ile Leu Ala Gln Thr Val Phe Trp Ser Pro Ile Tyr
 1 5 10 15
 His Pro Phe Ser Val Val Leu Val Leu Val Phe Ala Ile Cys Trp Ala
 20 25 30
 Pro Phe His Ile Asp Arg Leu Phe Phe Ser Phe Val Glu Glu Trp Ser
 35 40 45
 Glu Ser Leu Ala Ala Val Phe Asn Leu Val His Val Val Ser Gly Lys
 50 55 60
 Thr Leu Ala Gly Phe Gly Ala Leu Val Phe Arg Gln His Leu Leu Leu
 65 70 75 80
 His Leu Ala Met Pro Lys Tyr Ser Asn Leu Ser Arg Gly Ser Ala Met
 85 90 95
 Leu Arg His Leu Ile Phe Leu Leu Phe Arg Asp Leu Cys Leu Ile Leu
 100 105 110
 Phe Gln Ile His Ile Tyr Gln Ile Thr Ile Phe Lys Ala Thr Leu Trp
 115 120 125
 Lys Thr Ser Ser Leu Thr Val Met Ile Thr Glu Gly Lys Trp Ser Arg
 130 135 140
 Ser Asp Ser Phe Gly Tyr Pro Pro Asn Gly His Ala Ile Lys Leu Val
 145 150 155 160
 Leu Ile Thr Pro Met Ser Leu Glu Ile Ser Tyr Cys Leu Trp Glu Val
 165 170 175
 Leu Tyr Pro His Glu Gly Lys Leu Asn Gly Ile His
 180 185

<210> 155
 <211> 194
 <212> PRT
 <213> Homo sapiens

<400> 155

Leu Glu Val Gly Leu Trp Ala Ala Ser Phe Ile Leu Ala Leu Pro Val
 1 5 10 15
 Trp Val Tyr Ser Lys Val Ile Lys Phe Lys Asp Gly Val Glu Ser Cys
 20 25 30
 Ala Phe Asp Leu Thr Ser Pro Asp Asp Val Leu Trp Val Val Lys Thr
 35 40 45
 Glu Lys Arg Val Glu Leu Ser Cys Glu Glu Leu His Ser Pro Cys Gln
 50 55 60
 His Val Ser Ser Leu Lys Glu Tyr Pro Tyr Gly Ser Ser Ser Arg Gln
 65 70 75 80
 Tyr Leu His Val Ser Pro His Ile Gln Ser Arg Val Phe Leu Arg Arg

| | | | | | | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|--|--|--|--|
| 85 | | | | | | | 90 | | | | | | | 95 | | | | | | |
| Gly | Pro | Leu | Glu 100 | Lys | Asp | Phe | Glu | Phe 105 | Asn | His | Val | Thr | Ser 110 | Val | Asp | | | | | |
| Thr | Asn | Ile 115 | Phe | Lys | His | Gly | Phe 120 | Thr | Phe | Ile | Ala | Ala 125 | Arg | Arg | Ser | | | | | |
| Gly | Asn 130 | Ala | Ala | Ile | Lys | Gly 135 | Gly | Lys | Glu | Phe | Pro 140 | Glu | Ser | Leu | Arg | | | | | |
| Leu 145 | His | Leu | Ile | Ser | Met 150 | Gln | Leu | Gln | Phe | Ala 155 | Ile | Met | Ser | Pro | Ile 160 | | | | | |
| Lys | Thr | Cys | Ser | Ser 165 | Pro | Thr | Pro | Ala | Pro 170 | His | Thr | Cys | Glu | Cys 175 | Asp | | | | | |
| Leu | Ile | Trp | Lys 180 | Gly | Phe | Phe | Arg | Cys 185 | Asn | Gln | Ala | Lys | Leu 190 | Arg | Ala | | | | | |

Cys Trp

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<210> 156
<211> 234
<212> PRT
<213> Homo sapiens
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<400> 156

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|
| Leu 1 | Leu | Gly | Leu | Tyr 5 | Ile | Phe | Leu | Ser | Leu 10 | Val | Cys | Leu | Glu | Trp 15 | Thr |
| Leu | Phe | Gln | Ser 20 | Phe | Cys | Phe | Leu | Phe 25 | Leu | Cys | His | Leu | Val 30 | Ile | Phe |
| Ile | Asp | Trp 35 | Gly | Thr | Leu | Gly | Gly 40 | Ser | Gly | Leu | Arg | Thr 45 | Ser | Val | His |
| Gln | Gly 50 | Thr | Leu | Ala | Gly | Gln 55 | Glu | Arg | Ser | Glu | Pro 60 | Trp | Gly | Arg | Ala |
| Gln 65 | Val | Lys | His | Lys 70 | Leu | Gly | Ser | Ser | Cys | Pro 75 | His | Leu | Pro | Gly | Glu 80 |
| Ile | Arg | Thr | Leu | Cys 85 | Cys | Gly | Lys | Ala | Pro 90 | Val | Leu | Thr | Leu | Cys 95 | Gly |
| Gly | Gly | Val | Leu 100 | Leu | Gln | Tyr | Cys | Cys 105 | Gly | Lys | Ala | Pro | Pro 110 | Phe | Leu |
| Val | Phe | His 115 | Ile | Gly | Leu | Ile | Tyr 120 | Ser | Tyr | Phe | Leu | Tyr 125 | Leu | Phe | Cys |
| Pro | Leu 130 | Ile | Ser | Phe | Cys | Ser 135 | His | Leu | Ile | His | Phe 140 | His | Pro | Asn | Tyr |
| His 145 | Ser | Val | Leu | Tyr | Thr 150 | Tyr | Ser | Tyr | Ile | Ile 155 | Ala | Ser | Leu | Ser | His 160 |

Lys Leu Trp Tyr Asp Lys Val Met Phe Val His Cys Phe Cys Lys Lys
165 170 175

Ala His Ser Ala Phe Trp Gly Tyr Leu Leu Ile Asn Leu Tyr Arg Ile
180 185 190

Pro Met Arg Ile Gly Leu Asp Arg Val Phe Ser Thr Gln Phe Thr Arg
195 200 205

Pro Cys Cys Leu Ser Ile Met Ile Lys Asp Tyr Tyr Tyr Val Lys Met
210 215 220

Phe Ile His Ile His Lys Phe Val Glu Ile
225 230

<210> 157

<211> 183

<212> PRT

<213> Homo sapiens

<400> 157

His Leu Ile Leu Pro Leu Gly Cys Gln Pro Ala Asp His Arg Met Thr
1 5 10 15

Phe Ser Gly Tyr Ala Gln Asn Lys His Phe Arg Tyr Phe Leu Phe Phe
20 25 30

Glu Tyr Lys Asn Phe Leu Asp Tyr Val Leu Phe His Leu Ile Lys Ser
35 40 45

Leu Arg Pro Asn Leu Phe Arg Tyr Ile Cys Cys Ile Tyr His Leu Ile
50 55 60

Ser Leu Lys Leu Cys Cys Leu Gln Lys Leu Leu Ala Gly Thr Ser Val
65 70 75 80

Tyr Asn Ile Leu Ser Ser Thr Leu Thr Ile Ser Ser Ala Pro Lys Gln
85 90 95

Gly Leu Gly Leu Pro Phe Gln Glu Tyr Phe Tyr Tyr Ile Tyr Cys Arg
100 105 110

Gln His Arg Thr Leu Ser Lys Cys Leu Leu Ile Ser Pro Val Lys Ala
115 120 125

Ser His Ser Tyr Leu Tyr Ser Ile Gln Tyr Lys Ile Phe Lys Thr Tyr
130 135 140

Gly Gln Asn Lys Arg Ser Thr Ile Leu Thr Lys Leu Asn Leu Tyr Val
145 150 155 160

Tyr Phe Leu Tyr Leu Tyr Thr Phe Thr Cys Leu Leu Glu Asp Thr Val
165 170 175

Asn Thr Asp Asn Phe Lys Glu
180

<210> 158
 <211> 149
 <212> PRT
 <213> Homo sapiens

<400> 158

Lys Ile Ile Gln Asn Ala Cys Gln Ile Ile Leu Thr Ser Leu Pro Cys
 1 5 10 15
 Trp Cys Phe Trp Ser Ile Asp Cys Phe Phe Ser Phe Lys Leu Ile Leu
 20 25 30
 Ser Ile Met Ser Asp Phe Leu His Asn Thr Leu Gly Ile Met Phe Asn
 35 40 45
 Ser Gly Ser Tyr Leu Asn Pro Leu Phe Tyr Val Asp Phe Ser Asp Thr
 50 55 60
 Thr Leu Ile Gly Val Gly Val Gly Val Thr Val Ser Leu Pro Arg Arg
 65 70 75 80
 Gly Trp Lys Tyr Ser Phe Pro Thr Pro Val Leu Ile Leu Glu Trp Glu
 85 90 95
 Ser Ser Leu Gln Leu Gly Gly Ile Gly Ala Thr Ala Pro Cys Trp Val
 100 105 110
 Pro Thr Tyr Thr Thr Leu Ala Gly Ser Gly Arg Ser Ala Leu Ser Leu
 115 120 125
 Cys Pro Met Trp Pro Pro Leu Thr Leu Trp Gly Gly Val Ser Leu Leu
 130 135 140
 Pro Leu Ser Gly Gly
 145

<210> 159
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 159

Cys Ala Gly Ser Lys Arg Pro Thr Ile Ala Leu Leu Ala Thr Leu Ser
 1 5 10 15
 Gly Lys Leu Asp Trp Asp Asn Glu Thr Glu Thr Ser Gly His Val Asn
 20 25 30
 Met Ser His Thr Gly Gly Glu Trp Leu Val Asp Arg Gln Val Val Phe
 35 40 45
 Ser Leu Thr Val Leu Val Ala Leu Cys Gly Leu Val Gly Asn Asp Val
 50 55 60
 Ile Cys Trp Leu Leu Tyr Ser Gln Val Trp Ser Ser Pro Tyr Val Thr
 65 70 75 80

Tyr Ile Leu Asn Leu Ala Thr Val Asp Met Val Asn Leu Ser Cys Val
 85 90 95
 Thr Val Ile Leu Leu Glu Lys Ile Leu Met Leu Tyr His Gln Ala Ala
 100 105 110
 Leu Gln Val Ala Val Phe Leu Asp Pro Val Ser Tyr Phe Ser Asp Thr
 115 120 125
 Val Gly Leu Cys Leu Leu Val Ala Met Ser Ile Glu Ser Phe Leu Cys
 130 135 140
 Ala Leu Cys Pro Thr Trp Cys Cys His Arg Pro Glu His Thr Ser Ala
 145 150 155 160
 Met Val Arg Trp Ala Leu Ala Leu Ser Leu Tyr Ala Val Ser Gln Val
 165 170 175
 Cys Glu Tyr Trp Glu Lys Cys Leu Ala Cys Asp Gln Phe His Glu Ala
 180 185 190
 Leu His Val Met Tyr Leu Phe Ala Leu Trp Ala Cys Pro Ser Ser
 195 200 205

<210> 160
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 160

Ile Asn Ile Ser Phe Phe Lys Asn Asn Asn Val Ile Val Tyr His Phe
 1 5 10 15
 Asp Asn Ile Phe Ile Leu Asn Phe Asn Lys Lys Ala Cys Leu Leu Ile
 20 25 30
 Phe Leu Ile Asn Tyr Leu Val Phe Lys Tyr Leu Ser Tyr Leu Lys Thr
 35 40 45
 Asp Ile Ser Ile Thr Lys Ser Thr Ser Asn Ser Lys Pro Gly Arg Lys
 50 55 60
 Ala Asn Lys Ile Thr Asn Phe Lys Leu Arg Leu Leu Ser Gly Met Cys
 65 70 75 80
 Leu Cys Leu Leu Leu Phe Thr Val Thr Phe Ala Phe Phe Ser Thr Gln
 85 90 95
 Phe Thr Ser Glu Leu Gly Met Lys Leu Ile Leu Ala Tyr Phe Phe Pro
 100 105 110
 Phe Val Phe Val Lys Glu Glu Thr Gln Ser Ile Leu Glu Asn Pro Val
 115 120 125
 Trp Asn Ile Leu Met Phe Thr Ile Ser Asn Ile Met Lys Tyr Val Thr
 130 135 140
 Tyr His Leu His Leu Phe Gly Asn Tyr Leu Cys Thr Phe His Phe Asp

145 150 155 160
 Thr Gln Lys Trp Pro Leu Phe Phe Leu Cys Met Lys Pro Ile Tyr Tyr
 165 170 175
 Ile Arg Phe Tyr Ser Ile Ser Lys Leu Phe Gln Ser Ser Phe Ile Gly
 180 185 190
 Gln Thr Asp Ser Gln Tyr
 195

<210> 161
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 161

Met Val Glu Ser Val Lys Leu Val Lys Ser Phe Leu Leu Val Leu Gly
 1 5 10 15
 Thr Phe His Phe Lys Asn Ile Ser Lys Tyr Asn Tyr Ile Cys Pro Ser
 20 25 30
 Pro Phe Leu Lys Gly Leu Tyr Ile Ile Thr Tyr Ile Leu Phe Tyr Leu
 35 40 45
 Val Leu Phe Ile Tyr Pro Gly Asp His Phe Gln Ser Ser Val Tyr Ser
 50 55 60
 Ser Leu Cys Lys Cys Lys Thr Asp Tyr Ser Ala Ser Asn Thr Gly Trp
 65 70 75 80
 Thr Phe Leu Ser Phe Thr Leu Leu Leu Ile Val Leu Ile Ala Leu Pro
 85 90 95

Phe Cys

<210> 162
 <211> 185
 <212> PRT
 <213> Homo sapiens

<400> 162

Arg Arg Ser Pro Pro Ala Gly Thr Ala Ala Ala Ser Ala Gln Pro Thr
 1 5 10 15
 Trp Glu Gly Gly Ser Leu Ser Gly Ser Phe Asn His Thr Gln Gly Ile
 20 25 30
 Ala Val Phe Cys Leu Gly Val Arg Glu Ser Ser Pro Trp Ser Trp Gly
 35 40 45
 Thr Ala Leu Met Ser Glu Glu Asn Leu Ala Leu Gly Val Trp Thr Thr
 50 55 60
 Cys Val Lys Ile Leu Ala Trp Arg Leu Pro His Cys Val Thr Leu Ser

65 70 75 80
 Lys Phe Leu Asn Leu Ser Gly Ser Pro Phe Ser Arg Cys Thr Thr Gly
 85 90 95
 Gly Thr Val Pro Arg Arg Thr Leu Arg Ser Ser Val Gly Gly Glu Trp
 100 105 110
 Gly Leu Val Trp Ala Arg Arg Gly Leu Ala Ser Gln Ser Pro Glu Leu
 115 120 125
 Arg Ile Glu Arg Val Phe His Phe Thr Gly Gly Arg Gly Ala Ser Pro
 130 135 140
 Thr Ser Trp Thr Ser Leu Pro Gly Val Gly Lys Gly Gly Val Gly Ala
 145 150 155 160
 Val Leu Ser Ser His Thr Trp Thr Asp Ser Ser Thr Pro Tyr Ala Pro
 165 170 175
 Pro Ser Leu Pro Ser Ser Gly Pro Arg
 180 185

<210> 163
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 163

Pro Ser Pro Gly Ser Phe Arg Thr Lys Thr Phe Leu His Ser Leu Leu
 1 5 10 15
 Cys Val Ile Lys Ile Gly Ser Asn Pro Pro Thr His Ser Met Lys Gly
 20 25 30
 Asn Thr Val Val Lys Asn Leu Lys Phe Phe Ser Val Asn Ser Asn Pro
 35 40 45
 Gly Trp His Leu Asn Phe Glu Arg Ser Lys Arg Val Asp Leu Ala Val
 50 55 60
 Tyr Gln Leu Pro Thr Val Leu Ser Asp Pro Trp Lys Phe Leu His Ile
 65 70 75 80
 Leu Trp Arg Pro Phe Arg Ala Glu Ile Cys Leu Gly Val Cys Gly Thr
 85 90 95
 Glu His Ser Gly Cys Arg Met Trp Gln Ser Ile Arg Ser Leu Leu Arg
 100 105 110
 Pro Ser Leu Ser Leu Trp Gly Ser Phe Leu Glu Val Glu Pro Glu Ser
 115 120 125
 Phe Ser Arg Leu Gly Thr Cys Glu Leu Thr Gly Tyr Leu Arg Thr Val
 130 135 140
 Glu Ala Asn Lys Glu Ala Gln Glu Ala Ser Glu Val Ser Tyr Ile Ala
 145 150 155 160

MISSING AT THE TIME OF PUBLICATION

Val Leu Asn Arg Cys Thr Val Ser Ser Gly Thr Ile Glu Leu Leu Phe
 35 40 45
 Trp Ala Tyr Glu Leu Phe Pro Val Pro Tyr Cys His Pro Ile Phe Ala
 50 55 60
 Ile Tyr Lys Met Ser Ile Phe Phe Met Gly Val Asp Glu Leu Leu Phe
 65 70 75 80
 Gly Phe Ile Glu Gly Cys Phe Gly Thr Phe Ile Ser Ala Asn His Gly
 85 90 95
 His Ala Ser Ile Cys Pro Arg Glu Arg Ala Ser Lys Cys Asn Val Leu
 100 105 110
 Asp Val Ser Val Lys Ser Pro Gln Glu Ala His Asp Ser Asn His Arg
 115 120 125
 Gly Ser Gln Gly Pro Ser Arg Thr Gly Thr Ser Gly Leu Ala Cys Gly
 130 135 140
 Phe Ser Trp Tyr Val Cys Ile Ala
 145 150

<210> 171
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 171

Gly Gln Val Lys Lys Ser Lys Leu Phe Gly Leu Gln Phe Ser Gln Thr
 1 5 10 15
 Gln Glu Pro Ile Ile Gln Lys Gln Leu Ser Tyr Tyr Leu Phe Leu Leu
 20 25 30
 Gly Gly Thr Pro His Lys Gln Gly Leu Ala Gly Val Val Phe Val Leu
 35 40 45
 Tyr Trp Leu Arg Glu Gly Lys Gly Val Phe Leu Ile Val Phe Pro Val
 50 55 60
 Ala Gln Ile Leu Arg Cys Gly Asn Ala Tyr Cys His Phe Gly Lys Asn
 65 70 75 80
 Ser Phe Phe Ile Tyr Asn Thr Tyr Val Ile Ile Leu Ile Gln Phe Tyr
 85 90 95
 Lys Ile Ile Tyr Asn Met Lys Tyr Ile Phe Glu Lys Asn Asn Tyr Leu
 100 105 110
 Tyr Tyr Leu Tyr Leu Phe Arg Pro Cys Leu Ser Lys Val Leu Leu Ser
 115 120 125
 Leu Ala Thr Val Tyr Phe Pro Leu Trp Phe Glu Leu Lys Gln Met Leu
 130 135 140

Lys Glu Asn Lys Pro Ser Glu Pro Pro Asp Ser Phe Ile Ala Ala Val
 145 150 155 160
 Tyr Leu Leu Leu Ile Leu Leu Lys Phe Met Leu Gln Gln Ser Lys Thr
 165 170 175
 Gln Trp Ser Glu Thr Ser Leu Ile Glu Thr Gln Val Phe Leu Val Ser
 180 185 190
 Pro Leu Asp Arg Ala
 195

<210> 172
 <211> 174
 <212> PRT
 <213> Homo sapiens

<400> 172

Lys Gln Asn Leu Glu Ser Val Glu Ala Met Ile Phe Tyr Ser Phe Met
 1 5 10 15
 Thr Leu Arg Gln Cys Asn His Gly Leu Tyr Leu Ser Tyr Phe Phe Leu
 20 25 30
 Tyr Ser Met Ile Leu Leu Tyr Trp Val Ile Phe Gly Ser Gln Glu Ser
 35 40 45
 Met Ala Leu Val Trp Asn Phe His Gly Val His Lys Asn Asp Phe Asn
 50 55 60
 Gln His Ile Ile Ile Asn His Ile Tyr Ile Gly Ser Arg Tyr Arg Ser
 65 70 75 80
 Thr Cys Leu Ala His Ser His Ile Ser Val Ser His Gln Ser Ser Thr
 85 90 95
 Glu Arg Gly Gln Ile Phe Gln Lys Lys Gly Leu Glu Asn His Leu Glu
 100 105 110
 Gln Val Ala Ser Leu Ile Tyr Asn Leu Gly Asn Arg Ile Gly Glu Pro
 115 120 125
 Ile Lys Gly Ser Cys Ser Phe Ala Pro Glu Asn Lys Thr Gly Thr Pro
 130 135 140
 Ala Met Thr Val Lys Tyr His Arg Leu Pro Cys Asn Ser Asp Pro Ser
 145 150 155 160
 Arg Leu His Leu Trp Gly Ser Leu Arg Thr Arg Gly Phe Gly
 165 170

<210> 173
 <211> 175
 <212> PRT
 <213> Homo sapiens

<400> 173

Lys Asn Cys Ile Lys Phe Ala Gln Phe Gly Gly Lys Thr Gly Phe Gln
 1 5 10 15
 Lys Ser Ile Thr Leu Phe Leu Ile Asn Pro Leu Val Ser Gln Ser Phe
 20 25 30
 Ile Leu Trp Ser Ile Ile Ser Gln Ser Val Pro Ile Arg Lys Thr Lys
 35 40 45
 Asn Thr Val His His Ser Asn Thr Lys Gly Phe Asn Ser Gly Lys Arg
 50 55 60
 Leu Gln Arg His Trp Lys Gly Trp Gly Arg Lys Glu Arg Arg Leu Pro
 65 70 75 80
 Arg Asp Glu Arg Ala Ala Thr Thr Leu Arg Leu Glu Pro Ser Ser Cys
 85 90 95
 Ile Cys Cys Trp Arg Leu Arg Cys Gly Gln Cys Pro Phe Ser Thr Phe
 100 105 110
 Thr Glu Glu Ala Leu Cys Gly Gln Cys Arg Ile Gly His Asp Thr Ser
 115 120 125
 Thr Thr Gly Ala Arg Ser Glu Trp Arg Leu Ser Ser His Gln Leu Ser
 130 135 140
 Leu Ala Lys Phe Asp Lys Pro Val Gly Lys Gly Phe Trp Gln Met Glu
 145 150 155 160
 Tyr Thr Gly Phe Gln Ala Leu Gln Leu Asn Arg Val Gln Lys Gly
 165 170 175

<210> 174
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 174

His Asp Gly Arg Ala Tyr Cys Thr Ser Met Leu Gly Ile Ala Tyr Gly
 1 5 10 15
 Ser Ala Thr Asn Leu Phe Ser Met Leu Leu Asp Ile Val Gly Asn
 20 25 30
 Cys Asn Thr Met Val Ser Ile Cys Val Ser Lys Tyr Ile Asn Met Glu
 35 40 45
 Arg Thr Gln Lys Tyr Ser Ile Ile Ile Ser Trp Asp His His Cys Ile
 50 55 60
 Ser Gly Ser Leu Thr Lys Thr Leu His Asp Cys Ser Ser Leu Leu Gly
 65 70 75 80
 Gly Gly Gln Lys Leu Val Arg Asn Gly Trp Gln Leu Glu Gly Lys Glu
 85 90 95
 Met Thr Gln Ala Leu His Ser Pro Thr Ala Ala Ala His Arg Trp Pro

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| | | | 100 | | | | | 105 | | | | | 110 | | | | |
| Ser | Thr | Gly | Lys | Pro | Glu | Leu | Thr | Glu | Leu | Thr | Pro | Gly | Glu | His | Ser | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| Leu | Ile | Gly | Phe | Ile | Ile | Ile | Ser | Gln | Ser | Lys | Thr | Glu | Leu | Trp | Leu | | |
| | | 130 | | | | 135 | | | | | 140 | | | | | | |
| Arg | Ile | Lys | Ala | Arg | Phe | Phe | Phe | Leu | Asn | Ser | Ile | Ile | Phe | Ile | Lys | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | |
| Leu | Ser | Lys | Val | Ser | Leu | Gly | Lys | Thr | His | Met | Ser | Gln | Ala | Phe | Ser | | |
| | | | | 165 | | | | | 170 | | | | | 175 | | | |
| Val | Ser | Arg | Gly | Lys | Arg | Leu | Phe | Gln | Lys | Gln | Lys | Glu | Glu | Phe | Ile | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | |

Ser

<210> 175
 <211> 236
 <212> PRT
 <213> Homo sapiens

<400> 175

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Leu | Ser | Cys | Ser | Pro | Pro | His | Pro | Gly | Thr | Pro | Asn | Pro | Ser | Pro | Cys | | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | | |
| His | Leu | Gly | Phe | Cys | Ile | Ile | Leu | Thr | Gly | Phe | Tyr | His | Thr | Phe | Ile | | |
| | | 20 | | | | | | 25 | | | | | 30 | | | | |
| Tyr | Leu | Phe | Ile | His | Phe | Leu | Cys | Leu | Leu | Ser | Ala | Phe | Cys | Leu | Ser | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | | |
| His | Ser | Met | Lys | Thr | Leu | Gly | Val | Ser | Met | Lys | Thr | Ala | Arg | Leu | Arg | | |
| | | 50 | | | | 55 | | | | | 60 | | | | | | |
| Ser | Leu | Leu | Glu | Ala | Gln | Trp | Thr | His | Arg | Leu | Ser | Ser | Pro | Leu | Gly | | |
| 65 | | | | | 70 | | | | 75 | | | | | | 80 | | |
| Thr | His | His | His | Ile | His | Ile | Glu | Phe | Thr | Leu | Pro | Thr | Gly | Cys | Phe | | |
| | | | | 85 | | | | | 90 | | | | | 95 | | | |
| Gln | Pro | Ala | Ala | Glu | His | Ser | Lys | Val | Ile | Asn | Thr | Asp | Pro | Phe | Gly | | |
| | | 100 | | | | | | 105 | | | | | 110 | | | | |
| Lys | Met | Gln | Asp | Ser | Leu | Met | Gly | Asp | Phe | Gly | Ser | Arg | Ile | Pro | Arg | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| Trp | Trp | Gly | Gln | Ser | Ile | Pro | Gly | Ile | Ala | Leu | Gln | Pro | Lys | Ala | Val | | |
| | | 130 | | | | 135 | | | | | | 140 | | | | | |
| Leu | Leu | Gln | Ala | Ser | Ser | Leu | Pro | Cys | Leu | Leu | Leu | Gln | Ala | Ser | Asp | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | |
| Leu | His | His | Ser | Val | Arg | Leu | Ser | Leu | Ser | Phe | Leu | Ala | Leu | Ser | Pro | | |
| | | | | 165 | | | | | 170 | | | | | 175 | | | |

Gly Asn Val Ile Leu Ser Trp His Leu Leu Leu Ser Gly Thr Gly Leu
 180 185 190
 Met Tyr Gly Phe Cys Ser Leu Met Tyr Pro Glu Tyr Leu Asp Leu Glu
 195 200 205
 Val Cys Ser Lys Tyr Leu Trp Lys Glu Arg Leu Met Lys Ala Lys Cys
 210 215 220
 Lys Pro Ile Ala Phe Ile Leu Gly Ala Ala Pro Arg
 225 230 235

<210> 176
 <211> 129
 <212> PRT
 <213> Homo sapiens

<400> 176

Gln Leu Ile Phe Thr His Ala Ile Leu Leu Ser Asp Asp His Phe Asn
 1 5 10 15
 Ser Ile Lys Trp Lys Gln Asp Asn Val Ser Val Ile Leu Ser Leu Val
 20 25 30
 Ser Arg Ala Gln Ala Ile Val Phe Thr Met Leu Ser Gln Phe Ser Leu
 35 40 45
 Pro His Cys Arg Cys Val Leu Arg Gly Ala Val Gly Ser Ile Val Cys
 50 55 60
 Pro Glu Pro His Val Asn Gly Asn Met Met Val Leu His Cys Glu Arg
 65 70 75 80
 Arg His Asp Arg His Gly Asn Val Ser Gly Arg Asn Lys Ser Ile Ile
 85 90 95
 Lys Ile Leu Arg Gln Lys Phe Lys Asn Ser Trp Pro Leu Gly Glu Gly
 100 105 110
 Leu Ser Phe Ile Lys Asn Ile Phe Met Ile Ile Asn Leu Tyr His Thr
 115 120 125

Arg

<210> 177
 <211> 185
 <212> PRT
 <213> Homo sapiens

<400> 177

Leu Leu Val Pro Ser Thr Pro Cys Phe His Gly Cys Gly Val Ile Cys
 1 5 10 15
 Leu Lys Lys Ser Ser Pro Tyr Pro Ile Trp Leu Thr Ala Ser Ser Leu
 20 25 30

Ser Gly Phe Ile Leu Ala Phe Ser Met Val Asn Leu Pro Pro Asn Ser
 35 40 45
 Pro Ser Leu Pro Ser Leu Glu Tyr Ser Ser Pro Ile Leu Leu Trp Tyr
 50 55 60
 Pro Val Met Pro Leu Ala Asn Tyr Leu Ile Ile Leu Pro Ala Ile Asp
 65 70 75 80
 Cys Ser Cys His Trp Thr Val Phe Val Leu Leu Leu Met Phe Tyr Pro
 85 90 95
 Pro Val Pro Asn Thr Val Ser Gly Thr Gln Tyr Val Leu Ser Lys His
 100 105 110
 Leu Leu Val Ser Ser Asn Ser Leu Ser Val Lys Arg Val Ala Lys Gln
 115 120 125
 Ile Phe Asn Ile Ser Asp Leu Tyr Phe Phe Val Glu Tyr Ile Val Ala
 130 135 140
 Arg Glu Glu Cys Thr Pro Leu Gln Lys Ile Tyr Thr Tyr Ile Phe Met
 145 150 155 160
 Phe Tyr Ile Ile Gln Ser Leu Cys Ser Ile Ser Pro Thr Glu Gln Phe
 165 170 175
 Lys Ala His Phe Cys Leu Val Ser Glu
 180 185

<210> 178
 <211> 196
 <212> PRT
 <213> Homo sapiens

<400> 178

Ala Gly Glu Arg Gly Ser Glu Gln Thr Glu Glu Gly Gly Leu Cys Gly
 1 5 10 15
 Thr Asp Leu Gly Arg Ala Leu Val Ile Ile Leu Ser Phe Tyr Phe Gly
 20 25 30
 Lys Ser His Gly Ala Val Thr Leu Ala Val Asn Gly Pro Lys Pro Pro
 35 40 45
 Leu Ser Ser Ala Gly His Asp Ala Leu Trp Gln Val Cys Leu Gly Leu
 50 55 60
 Pro Glu Arg Ser Gln Ser Leu Val Phe Phe Ser Ala Thr Tyr Leu Asp
 65 70 75 80
 Arg Glu Ile Leu Thr His Ser Ala Asp Trp Ala Pro Thr Val Cys Val
 85 90 95
 Cys Val Arg Arg Phe Leu Val Gly Thr Leu Gly Gly Ser Ala Ser Trp
 100 105 110

Asp Ala Phe Gly His Leu Cys Val Cys Pro Phe Gly Gly Gly Cys Ala
 115 120 125
 Gly Thr Leu Leu Pro Leu Gln Val Ser Val Ile Ile Thr Ile Trp Ser
 130 135 140
 Gly Leu Tyr Cys Glu Trp Pro Arg Val Ala Val Gly His Val Asn Gln
 145 150 155 160
 Arg Cys Pro Val Val Gly His Trp Trp Glu Glu Gly Trp Asp Glu Cys
 165 170 175
 Leu Pro Leu Ser Ala Val Arg Cys Val Asn Ile Ser Leu Asn Pro Met
 180 185 190
 Arg Ser Gly Gly
 195

<210> 179
 <211> 197
 <212> FRT
 <213> Homo sapiens

<400> 179

Ser Ala Leu Thr Gln Ser His Leu Ala Met Lys Ile Leu Arg Asn Ser
 1 5 10 15
 Leu Leu Leu Ser Arg Ala His Leu Thr Gln Ser His His Gln Pro Gln
 20 25 30
 Glu Gly Val Ala Leu Gly Gly Leu Gly Glu Arg Glu Gly Pro Gly Glu
 35 40 45
 Arg Thr Ala Gly Leu Lys Pro Leu Arg Arg Glu His Ala Cys Ser Pro
 50 55 60
 Gly Thr Gly Arg Gly Arg Pro Ala Glu Leu Gln Gln Ala Arg Asn Gln
 65 70 75 80
 Ala Thr Ala His Pro Gln Glu Gln Asp Asp Trp Lys Gly Ala Arg Gly
 85 90 95
 Leu Gln Thr Leu Asn Cys Leu Asp Met Trp Leu Lys Ala His Ser Asn
 100 105 110
 Cys Asn Ala Arg Lys Arg Pro Pro Asp Trp Cys His Leu Gly His Leu
 115 120 125
 His Asp Lys Leu Ser His His Thr Pro Pro Glu Gln Lys Ala Arg Leu
 130 135 140
 Leu Cys Pro Val Glu Ala Gly Pro Ser Leu Glu Thr Ser Leu Thr Asp
 145 150 155 160
 Thr Thr Gly Phe Lys His Gly Leu Leu Pro Arg Phe Ile Trp Leu Cys
 165 170 175
 Ser Ala Ser Leu Ser His Gly Arg Met Asn Ala Cys Ile Pro Gln Lys

180

185

190

Glu Ala Ser Gly Leu
195

<210> 180
<211> 194
<212> PRT
<213> Homo sapiens

<400> 180

Gly Leu Cys Leu Tyr His Leu Pro Gln Pro Thr Ser Ile Gln Leu Met
1 5 10 15

Ala Ala Pro Thr Phe Lys Gln Ser Leu Val Leu Ala Phe Val Trp Leu
20 25 30

Tyr Phe Leu Phe Pro Arg Pro Ser Leu Pro Ser Phe Pro Ala Ser Ser
35 40 45

Leu Lys Ser Gly Gln Thr Ser Lys Ser Gly Cys Ser Ser Val Cys Trp
50 55 60

Val Phe Ser Phe Leu Pro His Leu Ser Thr Pro Phe Leu Trp Val Ile
65 70 75 80

Phe Ser Phe Pro Ala Met Leu Asn Ala Ile Phe Val Leu Thr Ala Pro
85 90 95

Gln Phe Gly Leu Gln Pro Asn Pro Leu Cys His Ile Leu Phe Pro Leu
100 105 110

Ser His Tyr Ala Pro Arg Arg Arg Ile Thr Leu Phe Cys Val Gly Ala
115 120 125

Ser Asp Leu Leu Asn Pro Val Pro Glu Thr Leu Gly Leu Trp Leu Phe
130 135 140

Leu Phe Leu Leu Leu Ser Ser Val Ser Leu Phe Gln Lys Gly Tyr Ile
145 150 155 160

Ser Asp Ser Ser Ser Ser Asn Ile Gly Thr Leu Pro Ile Ile Leu His
165 170 175

His Ile Ser Tyr Leu Phe Ser Phe His Leu Phe Lys Leu Ser Thr Phe
180 185 190

Cys Leu

<210> 181
<211> 230
<212> PRT
<213> Homo sapiens

<400> 181

Tyr Gly Pro Met Arg Ala Arg Leu Pro Ile Ile Cys Ser Cys Ser Pro

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | 5 | | 10 | | 15 | | | | | | | | | |
| Phe | Pro | Pro | Val | Gly | Ser | Ala | Phe | Ala | Asn | Ile | His | Met | Tyr | Phe | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Asp | Pro | His | Gly | Pro | His | Leu | Pro | Ser | Thr | Gly | Gly | Arg | Glu | His |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| His | Gly | Pro | Arg | Thr | Gly | Asn | Val | Val | Leu | Val | Gln | Ser | Tyr | Gln | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Pro | Val | Pro | Phe | Thr | Leu | Cys | Arg | Ser | Phe | Leu | Gly | Leu | Cys | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ile | Phe | Arg | Gly | His | Trp | Leu | Lys | Ser | Ala | Thr | Met | Arg | His | Leu | Gly |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Lys | Leu | Pro | His | Leu | Val | Ala | Pro | Leu | Pro | Asp | Asp | Thr | Glu | Leu | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Thr | Leu | Cys | Ser | Pro | Leu | Cys | Tyr | Phe | Cys | Ser | Thr | Gln | Ser | Gln | Val |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Arg | Leu | Ser | Ser | Ile | Gln | Arg | Val | Arg | Gln | Leu | Glu | Val | Pro | Ser | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ile | Ser | Arg | Met | Ser | Leu | Ala | Arg | Glu | Ala | Ala | Glu | Lys | Thr | Tyr | Leu |
| 145 | | | | | 150 | | | | 155 | | | | | | 160 |
| Gly | Arg | Gln | Ser | Lys | Thr | Glu | Thr | Lys | Lys | Ile | Pro | Ala | Leu | His | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Pro | Ser | Glu | Asp | His | Lys | Val | Gly | Gln | Ala | Gly | Thr | Ser | Arg | Trp | Arg |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asp | Ser | Glu | Arg | His | Gln | Gly | Leu | Leu | Leu | Val | Pro | Val | Ser | Phe | Pro |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Pro | Asn | Ala | Ala | Ala | Gln | Phe | Thr | Val | Lys | Lys | Val | Leu | Cys | Phe | Ser |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| His | Thr | Lys | Gln | Ala | Ala | | | | | | | | | | |
| 225 | | | | | 230 | | | | | | | | | | |

<210> 182
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 182

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Pro | Ser | Ser | Ser | His | Asn | Lys | Gln | Tyr | Phe | Tyr | Asn | Thr | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Gln | Tyr | Phe | Ile | Cys | Gln | Glu | Lys | Pro | Asn | Gly | Leu | Leu | Ile | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Lys | Gly | Lys | His | Ser | Leu | Gly | Val | Asn | Leu | Gly | Ser | His | Leu | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |

Thr Ser Tyr Arg Met Ser Ser Met Lys Val Ile Glu Leu Ile Ser Cys
 50 55 60
 Lys Lys Lys Gly Lys Leu Asn Ala Glu Leu Lys Tyr Ser Lys Val Tyr
 65 70 75 80
 Lys Val Gly Met Leu Val Leu Ser Thr Leu Tyr Arg Tyr Val Gln Val
 85 90 95
 Met Phe Phe His Ile Pro Leu Thr Phe Phe Val Phe Val Tyr Ser Ala
 100 105 110
 Met Phe Gln Asp Ala Arg Met Gln Tyr Ser Phe Arg Leu Leu Asp Asn
 115 120 125
 Thr Ser Ser Asn Tyr Ser Val Ile Lys Ile Ile His Ser Arg Ser Ile
 130 135 140
 Tyr Ala Leu Phe Gly Val Glu Gly Leu Asp Ile Tyr Ala Phe Ser Val
 145 150 155 160
 Asp Asn Tyr Ile Tyr Phe Gly Tyr Ile Gly Lys Tyr Leu Thr Gln Ile
 165 170 175
 Trp Tyr Tyr Gln
 180

<210> 183
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 183

Glu Tyr Glu Tyr Phe Tyr His Cys Leu Met Leu Val Arg Lys Gly Leu
 1 5 10 15
 Ala Leu Leu Ala Glu Val Gly Gly Val Cys Val His Ala Arg Thr Gly
 20 25 30
 Thr Cys Val Leu Cys Met Cys Ile Val Cys Glu Ile Leu Gly Asn Glu
 35 40 45
 Asn Glu Arg Ser Ser Cys Ile Leu Lys Arg Thr Ser Arg Val Leu Met
 50 55 60
 Ser His Ser Phe Tyr Ile Leu Lys Arg Phe Ser Leu Glu Gln Tyr Leu
 65 70 75 80
 Lys Lys Ala Tyr Ile Leu Ser Leu Ser Leu Ser His Thr His Thr Val
 85 90 95
 Ile His Leu Tyr Thr His Ser Asn
 100

<210> 184
 <211> 173
 <212> PRT

<213> Homo sapiens

<400> 184

Tyr Met Phe Arg Ser Asn Pro Asn Pro Asn Lys His Ile Val Leu Gln
 1 5 10 15
 Cys Val Phe Ile Gln Ile Glu Tyr Ser Phe Pro Phe Leu Asn Glu Asn
 20 25 30
 Ser Ala Leu Glu Arg Val Ser Ser Gly Gly Asp Leu His Leu Gly Gly
 35 40 45
 Cys Arg Val Trp Asp Leu Phe Tyr Phe Asn Leu Tyr Arg Ala Leu Phe
 50 55 60
 Ile Phe Leu Phe Phe Leu Gly Glu Asn Gly Ser Leu Gln Asp Ile Leu
 65 70 75 80
 Lys Cys Ile Lys Phe Gly Val Asn Ser Met Trp Leu Ala Lys Ile Gln
 85 90 95
 Cys Leu Ser Gly Asn Lys Phe Leu Leu Tyr Ala Lys Leu Asn Asn Leu
 100 105 110
 Pro Gly Lys Arg Thr Ser Ser Ser Cys Leu Ser Tyr Leu Leu Pro Leu
 115 120 125
 Pro His Gln His Cys Leu Pro Ala Val Gln Arg Ala Leu Cys Pro Ala
 130 135 140
 Pro His Leu Ser Ser Cys Leu Ala Ile Leu Thr Gly Leu Leu Glu Ala
 145 150 155 160
 Gly Ser Gln Ser Asp Ile Ser Ser Trp Gln Phe Glu Thr
 165 170

<210> 185

<211> 215

<212> PRT

<213> Homo sapiens

<400> 185

Ser Leu Val Pro Lys Gly Cys Arg Leu Leu Leu Met Met Lys Arg His
 1 5 10 15
 Ser Gln Val Lys Leu Ala Gln Glu Leu Tyr Ser Glu Val Pro Glu Pro
 20 25 30
 Ala Leu Leu Ala Ala Ser Leu Lys Leu Pro Ala Met Leu Glu Tyr His
 35 40 45
 Ala Asn Ser Arg Thr Thr Asp Thr His Glu Thr Lys Arg Met Asn Val
 50 55 60
 Thr Ser Val Pro Ile Met Asn Ala Arg Ser Glu Thr Ala Met Lys Gly
 65 70 75 80

Lys Ser His Gly Thr Phe Phe Pro Met Thr Phe Val Ala Gly Glu Leu
 85 90 95
 Trp Ser Cys Gly Cys Ala Ile Lys Lys Glu Ser Ile Val Phe Phe Pro
 100 105 110
 Gln Ile Ile Phe Lys Phe Ser Glu Leu Pro Phe Asp Leu Thr Pro Phe
 115 120 125
 Ile His Ala Met Lys Ser Phe His Tyr Leu Leu Leu Val Leu Phe Gly
 130 135 140
 Val Ile Thr Cys Ile Asn Leu Val Ile Thr Arg Asp Thr Ser Lys Ser
 145 150 155 160
 Ile Trp Leu Pro Phe His Leu Leu Lys Tyr Gln Lys Thr Lys Cys Leu
 165 170 175
 Leu Pro Gly Thr Phe Val Lys Thr Ile Thr Lys Leu Arg Leu Leu Ser
 180 185 190
 Phe Phe Ile Ser Thr Ile Lys Ser Val Thr Lys Ile Arg His Tyr Ser
 195 200 205
 Asp Leu Leu Lys Thr Thr Leu
 210 215

<210> 186
 <211> 167
 <212> PRT
 <213> Homo sapiens

<400> 186

Asn Ile Phe Lys Pro Leu Ser Ser Gln Gly Tyr Gln Leu Lys Val Phe
 1 5 10 15
 Ile Gly Asn Val Tyr Tyr Met Ser Lys Phe Pro Ala Ala Leu Arg Thr
 20 25 30
 Ile Gly Gln Val Ile Cys Pro Leu Ile Leu Val Thr Arg Ile Arg Val
 35 40 45
 Leu Leu Gln Ile Trp Lys Glu Lys Leu Asp His Cys Leu Leu Tyr Tyr
 50 55 60
 Tyr His Pro Asn Val Tyr Arg Gly Asn Gly Pro Glu Trp Ser Lys Pro
 65 70 75 80
 Arg Ala Tyr Gly Glu Val Glu Leu Ser Leu Glu Val Arg Ser Ala Cys
 85 90 95
 Pro Lys Ala Cys Thr Leu Ala Thr Ile Leu Ser Tyr Cys Met Leu Tyr
 100 105 110
 Thr Thr Phe Leu Cys Leu Cys Leu Cys Ile Ser Ile Cys Leu Ser Gln
 115 120 125
 Glu Val Phe Phe Leu Leu Ile Ile Lys Cys Gly Phe Phe Val Val Val

130 135 140
 Ile Leu Leu Lys Glu Leu Ser Cys Trp Val Gln Leu Ala Leu Thr Val
 145 150 155 160

Ala Ser Leu Leu Arg Glu Pro
 165

<210> 187
 <211> 209
 <212> PRT
 <213> Homo sapiens

<400> 187

Ile Ala Ile Tyr Ile His Leu Ile Ala Asn Pro Val Gly Cys Cys Gln
 1 5 10 15

Gln Leu Ala Leu Thr Ser Arg Ser Leu Thr Val Ile Gln His Ile Gln
 20 25 30

Leu Asn Thr Gly Arg His Lys Ala Pro Leu Ser Pro Ala Val Lys Phe
 35 40 45

Lys Met Arg Lys Ile Thr Gln Cys Leu Ser Pro Glu Cys Leu Ser Ile
 50 55 60

His Lys Ser Asn Val Pro Asn Ser Ser Phe Ala Asp Cys Cys Phe Leu
 65 70 75 80

Phe Arg Ser Asp Val His Gly Phe Ser Leu Gly Gln Asn Cys Glu Ile
 85 90 95

Val Lys Val Thr Glu Lys Ser Leu Gln Arg Ser Ile Gly Asn Leu Leu
 100 105 110

Met Thr Asn Cys Phe Cys Ile Val Pro Ile Leu Ser Asn Val Gln Val
 115 120 125

Phe Thr Pro Lys Val Ser Ile Val Asn Asn Phe Tyr Phe Leu Phe Phe
 130 135 140

Leu Arg Lys Cys Lys Ile Cys Phe Leu Asn Ile Glu Thr Tyr Lys Ile
 145 150 155 160

Gln Lys Arg Lys Ser Ile Phe Leu Leu Pro Arg Leu Lys Ser Leu Tyr
 165 170 175

Ser Tyr Phe Cys Val Tyr Arg Gly Tyr Phe Ser Ser Ile Tyr Ile His
 180 185 190

Ile Lys Ser His Leu Ser Asn Gly Ile Leu Leu Phe Tyr Ile Phe Thr
 195 200 205

Thr

<210> 188
 <211> 233

<212> PRT
 <213> Homo sapiens

<400> 186

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Leu Cys Gly Arg Ser Ala Pro Ile Ile Phe Thr Leu Phe Arg Ser Gln
1          5          10          15
Leu Tyr Ile Ile Asn Pro Trp Asp Asn Ile Gly Ile Gln Phe Lys Tyr
20          25          30
Phe Ser Ser Asp Lys Leu Asn Ala His Ile Arg Tyr Thr Phe Ala His
35          40          45
Phe Arg Ser Tyr Phe Ile Phe Trp Leu Ser Glu Arg Ala Ser Ser Lys
50          55          60
Asp Ser Phe Gln Cys Phe Leu Val Ala Tyr Ser Pro Asp Val Ser His
65          70          75          80
His Gln Leu Asn Ile Leu Arg Ala Ile Lys Arg Thr Val Phe Val Leu
85          90          95
Phe Cys Phe Leu Phe Val Pro Asn Ser Cys Leu Trp Phe Cys Gln Gly
100         105         110
Val Ile Ala Ile Phe Phe Ser His Lys Ile Ala Val Val Phe Pro Leu
115         120         125
Tyr Glu Phe Asp Cys Arg His Ala Gly Cys Leu Val Met Val Asn Phe
130         135         140
Ser Leu Leu Leu Lys Val Leu Cys Pro Ser Val Ala Val Ser Ser His
145         150         155         160
Glu Phe Ser Asp Thr Cys Phe Ile Gly Gly Glu Asn Ser Lys Pro Pro
165         170         175
Ala Arg Arg Leu Lys Asn Asn Gly Glu Asp Glu Met Thr Gln Thr Ser
180         185         190
Val His Pro Gly Lys Gln Leu Leu Ala Gly Leu Glu Cys Gly Gly Glu
195         200         205
Leu Leu Arg Glu Arg Ser Ile Ser Thr Pro Leu Ile Leu Ser Ser Cys
210         215         220
Ser Pro Ala Pro Asp Gly Gln Lys Glu
225         230

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<210> 189
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 189

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Met Met Leu Ile Asn His Leu Tyr Asn Phe Leu Gly Glu Met Ser Asn
1          5          10          15

```

Thr Leu Pro Ile Leu Met Gly Tyr Leu Leu Tyr Cys His Ile Val Ile
 20 25 30
 Leu Met Ser Gly Tyr Lys Phe Leu Ile Arg Tyr Val Val His Phe Ile
 35 40 45
 Ser Leu Cys Gly Phe Phe Leu Pro Asp Val Ile Ile His Thr Thr Met
 50 55 60
 Phe His Phe Glu Ser Ser Ile Tyr Leu Phe Phe Phe Leu Trp Leu Leu
 65 70 75 80
 Val Leu Leu Val Leu Asn Leu Lys Ser Gln Ser Arg Leu Thr Pro Lys
 85 90 95
 Ser Ser Lys Ser Val Ile Val Leu Ser Ser Tyr Ile Trp Val Gln Phe
 100 105 110
 Tyr Cys Phe Val Asn Leu Thr Arg Ile Ser Gln Tyr Ile Asn Ser Lys
 115 120 125
 Pro Met Asn Thr Cys Ser Leu Glu Lys Asn Gln Lys Ile Cys Thr Lys
 130 135 140
 Lys Ile Lys Gln Asn Thr Phe Ile Ile Leu Phe Ile Gln Lys Gln Leu
 145 150 155 160
 Leu Leu Ala Cys Trp Phe Met Leu Pro Asn Pro Ile Phe Cys Glu Cys
 165 170 175
 Ile Leu Ile Phe Val Tyr Ile Cys Ile Gly Met His Val Tyr Ile Leu
 180 185 190
 Val Gly Leu His Asn Ala His Ser Cys Val Asp Arg Phe Phe Ser Leu
 195 200 205
 Ile Tyr Cys Lys His Ile Cys Arg Ser Val Phe Trp Thr Trp Leu Phe
 210 215 220
 Thr Ser Ser Val Ser Ala Ala Glu Gln Val Leu Val Asp Asn Gln Met
 225 230 235 240
 Lys Cys Tyr Lys Cys Thr Leu
 245

<210> 190
 <211> 202
 <212> PRT
 <213> Homo sapiens

<400> 190

Val Val Phe Val Leu Ser Ile Phe Pro Ser Glu Ile Lys Ile Asn Thr
 1 5 10 15
 Cys Pro His Pro Tyr Leu Leu His Tyr Gly Pro Thr Leu Phe Ile Val
 20 25 30

Gln Lys Leu Gly Leu Pro Leu Thr Phe Leu Cys Cys Tyr Ser Asn Leu
 35 40 45
 Leu Ser Ser Lys Phe Ile Ser Met Leu Phe Pro Leu Ser Ile Leu Gln
 50 55 60
 His Leu His Ile Leu Leu Phe Ala Leu Leu Asn Thr Lys Val His Ser
 65 70 75 80
 Asp Phe Phe Leu Ile Leu Ser Val Leu Cys Phe Leu Ala Leu Val Gly
 85 90 95
 Pro Phe Leu Thr Ile Asn Ile Phe Ser Ile Ser Ser His Tyr Leu His
 100 105 110
 Leu Leu Asn Leu Thr Leu Tyr Ser Thr Ala Ile Tyr Phe Leu Glu Leu
 115 120 125
 Leu Ile Ser Arg Thr Phe Leu Ile Leu Tyr Ile Leu Asn Thr Val Tyr
 130 135 140
 Phe Ser Arg Ala Trp Lys Lys Lys Val Ser Leu Ile Gln Val Val Asn
 145 150 155 160
 Ile Gln Ser Pro Asn Lys Cys Leu Leu Ser Thr Asp Tyr Ile Pro Ser
 165 170 175
 Thr Pro Val Gly Ser Arg His Val Arg Asn Glu Ala Ile Lys Ile Ser
 180 185 190
 Thr Leu Thr Glu Ile Lys Phe Ser Gly Glu
 195 200

<210> 191
 <211> 205
 <212> PRT
 <213> Homo sapiens

<400> 191

Leu Cys Leu Lys Ile Ile Ile Ile Lys Asn Ile Tyr Leu Tyr Met Val
 1 5 10 15
 Tyr Glu Phe Asp Thr Phe Cys Phe Ile Ser Gly Leu Met Cys Tyr Arg
 20 25 30
 Lys Gly Met Thr Leu Asn Ser Leu Asn Phe Ser Leu Ile Ala Leu Asp
 35 40 45
 His Phe Gln Leu Ser His Leu Tyr Asn Ile Gly Gln Val Thr Pro His
 50 55 60
 Ala Tyr Phe Ala Ile Tyr Lys Ser Ala Asn Arg Thr Leu Ile Gly Leu
 65 70 75 80
 Leu Arg Gly Ile Ser Lys Thr Ile Glu Ser Ser Ile Trp Trp Gly Ser
 85 90 95
 Thr Asn Ile Ser Thr Leu Leu Thr Leu Phe Phe Ser Pro Cys Tyr Ala

| | | | | | | | | | | | | | | | |
|-------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 100 | | 105 | | 110 | | | | | | | | | | |
| Phe | Gln | Phe | Ile | Ser | Thr | Lys | Leu | Val | Ile | Lys | Ile | Gln | Ala | Glu | Val |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Leu | Leu | Ile | Ser | Leu | Cys | Val | Leu | Pro | Gly | Ser | Tyr | His | Ser | Ala | Arg |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asp | Thr | Gln | Ala | Pro | Ser | Phe | Met | Val | Asn | Thr | Asp | Ser | Glu | Leu | Cys |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Leu | Arg | Pro | Phe | Gly | Met | Leu | Gln | Gln | Asn | Thr | Ile | Asp | Arg | Val | Thr |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Tyr | Lys | Pro | Gln | Lys | Cys | Val | Ser | Tyr | Arg | Ser | Gly | Gly | Trp | Glu | Val |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gln | Asp | His | Gly | Ile | Val | Arg | Phe | Ser | Val | Trp | Arg | Pro | | | |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| <210> | 192 | | | | | | | | | | | | | | |
| <211> | 197 | | | | | | | | | | | | | | |
| <212> | PRT | | | | | | | | | | | | | | |
| <213> | Homo sapiens | | | | | | | | | | | | | | |
| <400> | 192 | | | | | | | | | | | | | | |
| Ala | His | Cys | Val | Phe | Ile | Ile | Met | Glu | Glu | Gln | Trp | Ser | Leu | Lys | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Ile | Ile | Pro | Ser | Pro | His | Cys | Gly | His | Leu | Phe | Leu | Ser | Asn | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Leu | Glu | Gln | Leu | Ala | Arg | Met | Gln | Asn | Leu | Met | Ile | Phe | Ser | Leu |
| | 35 | | | | | | 40 | | | | | 45 | | | |
| Pro | Leu | Leu | Asp | Pro | Ala | Tyr | Thr | Pro | Pro | Leu | Val | Glu | Val | Pro | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Ser | Glu | Met | Thr | Lys | Arg | Gln | Gly | Val | Gly | Gly | Arg | Gly | Lys | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Asn | Lys | Pro | Ser | Asp | Gln | Pro | Gln | Met | Thr | Glu | Cys | Trp | Leu | Phe | Ser |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ile | Ile | Tyr | Ser | Phe | Glu | Leu | Ser | Gln | Met | Cys | Phe | Ser | Glu | Lys | Thr |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Phe | Met | Leu | Ser | Phe | Leu | Ser | Ser | Leu | Ile | Val | Asn | His | Gln | Phe | Pro |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Cys | Asn | Gly | Leu | Arg | Val | Gln | Ser | Pro | Met | Arg | Ser | Arg | Ala | Ala | Arg |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Phe | Ser | Arg | His | Ser | Thr | Thr | Phe | Pro | Ser | Pro | Phe | Phe | Lys | Gln | Ala |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Phe | Lys | Leu | Cys | Met | Lys | Pro | Cys | Gln | Thr | Lys | Met | Lys | Val | Thr | Lys |
| | | | | 165 | | | | | 170 | | | | | 175 | |

Val Lys Ile Gln Lys Gln Phe Ile His Pro Arg Tyr Leu His Thr Ala
 180 185 190

Leu Asn Met Val Asp
 195

<210> 193
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 193

Pro Ser Ser Trp Lys Leu Leu Phe Tyr Thr Leu Ile His Ser Gly Ile
 1 5 10 15

His Tyr Gln Val His Arg Val Val Lys Phe Arg Ile Arg Glu Asn Val
 20 25 30

Glu Lys Val Ser Ala Arg Leu Leu Pro Lys Tyr Trp Ser Asn Ile His
 35 40 45

Gln Thr His Met Val His Glu Gly Gln Thr Ser Ile Ile Cys Ser Cys
 50 55 60

Ser Pro Phe Pro Pro Val Gly Ser Ala Phe Ala Asn Ile His Met Tyr
 65 70 75 80

Phe Gln Lys Asp Pro His Gly Pro His Leu Pro Ser Thr Gly Gly Arg
 85 90 95

Glu His His Gly Pro Arg Thr Gly Asn Val Val Leu Val Gln Ser Tyr
 100 105 110

Gln Leu Leu Pro Val Pro Phe Thr Leu Cys Arg Ser Phe Leu Gly Leu
 115 120 125

Cys Ser Ile Phe Arg Gly His Trp Leu Lys Ser Ala Thr Met Arg His
 130 135 140

Leu Gly Lys Leu Pro His Leu Val Ala Pro Leu Pro Asp Asp Thr Asp
 145 150 155 160

Leu Arg Thr Leu Cys Ser Pro Leu Cys Tyr Phe Cys Ser Thr Gln Ser
 165 170 175

Gln Val Arg Leu Ser Ser Ile Gln Arg Val Arg Gln Leu Glu Val Pro
 180 185 190

Ser Pro Ile Ser Arg Met Ser Leu Ala Arg Glu Ala Ala Glu Lys
 195 200 205

<210> 194
 <211> 179
 <212> PRT
 <213> Homo sapiens

<400> 194

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Ile Gln Gln Lys Arg Arg Arg His Arg Ala Thr Arg Lys Ile Gly Ile
1      5      10      15
Ala Ile Ala Thr Phe Leu Ile Cys Phe Ala Pro Tyr Val Met Thr Arg
20      25      30
Trp Val Leu Ala Val Arg Leu Leu Leu Trp Glu Gln Leu Gly Gly Leu
35      40      45
Gly Leu Ser Val Gly Leu Gly Phe Pro Ala Arg Tyr Leu Glu Gly Gly
50      55      60
His His Gln Arg Thr Leu Leu His Thr Arg Ala Gln Gly Cys Ala Ser
65      70      75      80
Ala Pro Gly Lys Asp Pro Gly Arg Glu Val Ala Leu Ala Pro Ile Leu
85      90      95
Ser Tyr Lys Gly Asp Ser Pro Cys Pro Gly Thr Gly Arg Tyr Gly Val
100     105     110
Cys Glu Ser Ala Pro Gly Ser Leu Asn Leu Glu Ser Phe Gln Asn Gln
115     120     125
Ala Thr Trp Asp Leu Arg Pro Gln Thr Pro His Leu Leu Gly Val Glu
130     135     140
Leu Gly Ile Trp Val Glu Ala Pro Ala Gly Ala Ser Gly Gln His Cys
145     150     155     160
Gln Val Ser Val Leu Phe Ala Ser Leu Phe Pro Gly Asp Leu Gly Leu
165     170     175

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Ser Ala Cys

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<210> 195
<211> 138
<212> PRT
<213> Homo sapiens
<400> 195

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Arg Asn Ser Val Glu Arg Ala Ser Val Leu Asn Val Val Lys Val Tyr
1      5      10      15
Thr Glu His Gly Pro Phe Ile Trp Val Arg Glu Thr Thr Ser Pro Phe
20      25      30
Val Leu Ser His Phe Leu Leu Val Phe Leu Thr His Ile Ala Asp Val
35      40      45
Ile Leu Met His Lys Tyr Leu Gly Lys Val Ser Glu Ala Gly Phe Leu
50      55      60
Leu Val Phe Pro His Ser Leu Ser Val Val Cys Phe Tyr Ile Leu Cys
65      70      75      80

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Asp Phe Pro Ile Thr Phe Leu Cys Phe Tyr Arg Arg Ser Arg Ser Cys
 85 90 95
 Leu Thr His Leu Trp Thr Leu Ala Asn Gly Met Arg Gly His Met Pro
 100 105 110
 Phe Leu His Pro Ser Arg Ser Leu Met Trp Leu Gln Arg Ala Gln Gly
 115 120 125
 Leu Tyr Ser Gly Ser Leu Pro Ala Gln His
 130 135
 <210> 196
 <211> 196
 <212> PRT
 <213> Homo sapiens
 <400> 196
 Phe Thr Lys Pro Ile Ile Ile Ser Asn Pro Asn Arg Asp Leu Trp Leu
 1 5 10 15
 Leu Ser Ile Lys Gly Asn Lys Ala Pro Ser Pro Ile Leu Ile Ile Phe
 20 25 30
 Ser Phe Leu Phe Tyr Phe Leu Ser Phe Phe Asn Met Phe Gln Cys Gln
 35 40 45
 Asn Arg Leu Ala His Leu Cys Ser Pro Ala Ala Phe Pro Arg Arg Ala
 50 55 60
 Ala Ser Asn Ser Leu Trp Ser Gln Trp Ala Ile Ile Arg Gly Asn Thr
 65 70 75 80
 Cys Met Leu Lys Ser Ile Cys Pro Leu Thr Ile Asp Lys Gln Ala Leu
 85 90 95
 Asn Lys Lys Ser Ser Thr Gln Ile Ser Phe Leu Asn Ala Val Leu Phe
 100 105 110
 Leu Arg Phe Lys Asn Ser Ser Thr Pro Phe Ile Leu His Ile Tyr Phe
 115 120 125
 Thr Thr Ala Leu Leu Thr Ser Phe Pro Ile Leu Ala Gln Asn Phe Tyr
 130 135 140
 Glu Glu Asn Leu Arg Ile Thr Ala Leu Val Thr Cys Trp Ser Gly His
 145 150 155 160
 His Ala Phe Phe Ile Trp Gln Leu Ile Gln Ser Leu Phe His Asn Lys
 165 170 175
 Ser Asp Leu Glu Ser Gln Arg Lys Lys Lys Leu Arg Thr Cys Trp Glu
 180 185 190
 Ser Pro Val Ser
 195
 <210> 197

<211> 116
 <212> PRT
 <213> Homo sapiens

<400> 197

Phe Val Phe Lys Leu Val Thr His Thr His Thr Ser Ser Ala Arg His
 1 5 10 15
 Thr Met Lys Thr Val Ala Pro Val His Phe Ser Leu Leu Val Pro Arg
 20 25 30
 Gly Asn Tyr Phe Leu Leu Ile Val Phe Phe Trp Tyr Leu Ser Pro Tyr
 35 40 45
 Leu Ser Leu Tyr Cys His Phe Leu Ile Phe Gln Phe Ser Thr Leu Ile
 50 55 60
 Phe Gln Phe Phe His Ala Gly Arg Arg Gly Phe Asn Tyr Phe Leu Leu
 65 70 75 80
 Ser Phe Pro Val Thr Gln Tyr His Thr His Thr Pro Ser Leu Thr Pro
 85 90 95
 Thr Leu Ser Ile Phe Ser Leu Lys Ser Ile Ile Asn Ile Tyr Ile Ile
 100 105 110
 Ile Met Cys Arg
 115

<210> 198
 <211> 220
 <212> PRT
 <213> Homo sapiens

<400> 198

Ala Pro Val Lys Ile Ser Val Leu Gln Asp Lys Arg Cys Gly Gln Gly
 1 5 10 15
 Thr Gln Ser Leu Ile Glu Val Leu Met Leu Pro His Ser Trp Ala Asp
 20 25 30
 Ala Ile Leu Leu Trp Glu Leu Thr Ser Ser Pro Cys Thr Thr Ser Glu
 35 40 45
 Gly Ser Ser Pro Ser Ile Leu Tyr Cys Thr Tyr Leu Thr His Thr Leu
 50 55 60
 His Ser Ser Ala His Phe Leu Arg Val Arg Ala Phe Ser Ile His Ser
 65 70 75 80
 Ile Leu Trp Phe Leu Asn Leu Trp His Gly Phe Leu Ile Arg Asp Pro
 85 90 95
 Gln Glu Ile Thr Arg Lys Thr Asp Thr Gln Ala Pro Ser Cys Asn Pro
 100 105 110
 Arg Gln Asp Glu Leu Ser Thr Lys Ile Glu Lys Pro Leu Arg Val Pro

115 120 125
 Trp Arg Ala Val Gly Lys Ser Gly Val Arg Ser Ser Thr Ser Gln Gly
 130 135 140
 His Thr Leu Pro Leu Ser Pro Leu Ser Cys Met Ser Ser Gly Lys Leu
 145 150 155 160
 Ser Lys Leu His Gly Gln Gly Cys Leu Asp Asp Thr Cys Gly Gln Gln
 165 170 175
 His Pro His Ile Pro Arg Asp Val Glu Lys Pro Lys Lys Gly Ala Ala
 180 185 190
 Trp Arg Glu Phe Trp Gly Lys Glu Arg Gln Phe Cys Val Asp Cys Gln
 195 200 205
 Asp Gln Pro Cys Leu Leu Arg Cys Leu Glu Gln Ala
 210 215 220

<210> 199
 <211> 200
 <212> PRT
 <213> Homo sapiens

<400> 199

Leu Leu Phe Leu Val Tyr Thr Ile Ser Thr Thr Gly Val Val Gly Asp
 1 5 10 15
 Lys Asp Asn Ile Phe Ser Pro Leu Ser Thr Pro Phe Leu Phe Cys Pro
 20 25 30
 Phe Cys Gly Pro Ile Ile Cys Gln His Leu Lys Ile Gly Ser His Leu
 35 40 45
 Leu Arg Ile Lys Met His Pro Tyr Pro Gly Ser Phe Ser Met Ser Arg
 50 55 60
 Ile Thr Ile Ser Lys His Ala Tyr Pro Asn Leu Thr Cys Gln Leu Gln
 65 70 75 80
 Trp Thr Leu Ile Ser Thr Ser Leu Pro Pro Ala Pro Ser Ser Val Leu
 85 90 95
 Cys Ile Ile Gln Lys Tyr Ser Ser Ser Glu Val Arg Leu Trp Tyr Thr
 100 105 110
 Ile Phe Leu Ile Ile Ile Trp Phe Ser Tyr Phe Ile Thr His Ile Ser
 115 120 125
 Phe Ile Leu Asn Leu Ser Leu Phe Cys Asn Leu Ser Leu Pro Ser Leu
 130 135 140
 Phe Ile Ser Val Met Val Trp Val Phe Leu Ser Leu Gln Asn Ser Cys
 145 150 155 160
 Asn Val Ser Ser Ala Ser Val Leu Lys Arg Trp Gly Leu Gly Gly Asp
 165 170 175

Val Thr Lys Val Pro Pro Ser Met Gly Leu Arg Thr Leu Tyr Lys Arg
 180 185 190

Leu His Thr Ala Phe Ser Cys Phe
 195 200

<210> 200
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 200

Ser Ala Ile Val Ile Phe Leu Ser Ser Phe Leu Cys His Phe Leu Phe
 1 5 10 15

Ile Phe Gly Arg Arg Met Leu Ser Tyr Tyr Lys Pro Tyr Lys Cys Lys
 20 25 30

Leu Ile Ile Val Arg Lys Cys Tyr Ile Ser Glu Cys Leu Leu Arg Leu
 35 40 45

Ser Thr Phe Trp Cys Pro Tyr Ala Ala Pro Cys Cys Pro Val Ser Thr
 50 55 60

Leu Thr Glu Asn Cys Pro Lys Leu Pro Thr Phe Ser Thr Ser Leu Tyr
 65 70 75 80

Ser Ala Ile Lys Thr Tyr Leu Ala Arg Asp Pro Asp Cys Trp Ser Phe
 85 90 95

Pro Pro Gln Cys Gln Trp Val Asn Arg Gln Ile Lys Glu Arg Ser Ser
 100 105 110

Ser Leu Phe Ile Tyr Pro Phe Ile Ile Phe Trp Gln Leu Thr Gln Ala
 115 120 125

Phe Glu Leu Val Leu Cys Gly Gln Cys Leu Ile Ser Arg Phe Pro Ser
 130 135 140

Leu Gly Phe Gln Thr Leu Pro Val Leu Val Gln Ala Thr Leu Met Asp
 145 150 155 160

Leu Ser Leu Pro Val Ser Asn Leu Cys Thr Ser Pro Thr Leu Tyr Pro
 165 170 175

His Trp Leu Leu Ala Val Phe Pro Thr Ala Thr Cys Val Leu Pro Ser
 180 185 190

Leu Pro Val Pro Thr Leu
 195

<210> 201
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 201

Ser Thr Arg Cys His Arg Cys Ser Val Pro Trp Pro Gly Pro Phe Trp
 1 5 10 15
 Arg His Gln Thr His Asp Lys Ala Gln Ala Val Arg Lys Glu Lys Asn
 20 25 30
 Leu Val Leu Ser Ser Phe Leu Gln Ser Glu Arg Trp Met Cys Val Thr
 35 40 45
 Leu Ser Leu Leu Glu Thr Leu Ile Lys Trp Phe Leu Leu Met Val Leu
 50 55 60
 Leu Ser Leu Arg Thr Leu Arg Ala Gly Val Gly Met Asn Leu Cys Asp
 65 70 75 80
 Ile Tyr Ala Tyr Ser Glu Ser Leu Leu Ser Ser Lys Asn Val Val Lys
 85 90 95
 Leu Glu Pro Val Phe Phe Leu Ser Ser Gln Glu Asp Leu Arg Lys Ser
 100 105 110
 Gln Ser Cys Thr Lys Phe Ser Cys Phe Ile Asn Arg Ser Pro Ala Ile
 115 120 125
 Ser Thr Phe Trp Leu Lys Leu Tyr Ile Phe Thr Tyr His Asn Asp Cys
 130 135 140
 Leu Val Asn Asp Phe Leu Ser Tyr Gln Leu Leu Glu Ser Tyr Thr Thr
 145 150 155 160
 Phe Arg Ala Thr Val Ser Phe Leu Leu Phe Leu Tyr Trp Ile Leu Val
 165 170 175
 Gln Phe Ser His Pro Lys Thr Leu Met Ala Tyr Asn Ile Ile Pro Met
 180 185 190
 His Ile Leu Ser Tyr Thr Ser Asn His Leu Ile Ile Tyr Asn
 195 200 205
 <210> 202
 <211> 167
 <212> PRT
 <213> Homo sapiens
 <400> 202

Thr Ser His Thr His Gly Ser Ser Ser Met Ile His Thr Leu Thr Gly
 1 5 10 15
 Ile Asn Leu Pro Leu His Phe Trp Pro Arg Arg Thr Phe Ser Asp Trp
 20 25 30
 Gly Ser Lys Glu Ile Thr Glu Ile Ile Lys Arg Lys Ile Ile Ser Gln
 35 40 45
 Asp Ser Phe Ala Thr Tyr Leu Ala Leu Lys Leu Arg Phe Ser Glu His
 50 55 60

Cys Ile Leu Pro Gln Thr Thr His Thr His Thr His Ile Glu Tyr Phe
 65 70 75 80
 Lys Ile Arg Asn Trp Ala Thr Tyr Asn Ser Gly Lys Arg His Leu Asn
 85 90 95
 Gly Thr Glu His His Ile Tyr Glu Ser Ser Val Gln Arg Ile Ser Glu
 100 105 110
 Asn Val His Lys Val Ser Ala Phe His Arg Leu Gly Ile Glu Ala Val
 115 120 125
 Ala Ile Thr Ile Lys Ile Gln Ala Gln Gly Lys Met Lys Leu Gly Val
 130 135 140
 Lys Gly Ser Glu Ile His Phe Arg Lys Ala Phe Lys Ala Arg Lys Met
 145 150 155 160
 Arg Ser Thr Trp Tyr Val Phe
 165

<210> 203
 <211> 181
 <212> PRT
 <213> Homo sapiens

<400> 203

Asn Lys Ser Ser Lys Gly Asn Ile Phe Arg Cys Phe Tyr Tyr Phe Leu
 1 5 10 15
 Phe Phe Ile Phe Leu Leu Trp Lys Leu Leu Val Gln Thr Ala Pro Phe
 20 25 30
 Cys Asn Pro Pro Ala Ile Ser Gln Thr Ser Val Lys Val Lys His Ser
 35 40 45
 Thr Gly Val Arg Ala Val Thr Asn Ser Leu Pro Asn Arg Leu Thr Leu
 50 55 60
 Leu Leu Tyr Ser Ala Gly Arg Lys Cys Lys Glu Pro His Thr Ala Leu
 65 70 75 80
 Glu Gln Ala Pro Asn Cys Leu Ile Met Gly Thr Cys Tyr Gln His Phe
 85 90 95
 Pro Arg Gln Gln Ala Met Pro Pro Val Pro Asp Pro Ser His Leu Ala
 100 105 110
 Tyr Asn Cys Pro Ser Leu Val Ala Met Ala Ile Gly Ile Lys Leu Gln
 115 120 125
 Val Leu Cys Trp Thr Ser Arg His Leu Leu Ser His His Ser Leu Ser
 130 135 140
 Leu Cys Leu Ser Leu Thr Leu Ala Phe Pro Ser Lys Pro Asn Lys Asn
 145 150 155 160
 Tyr Leu Asp Asn Phe Ser Ser Ser Ser Ser Lys Asn Leu Ile Phe Cys

165 170 175
 Leu Phe Val Leu Val
 180
 <210> 204
 <211> 186
 <212> PRT
 <213> Homo sapiens
 <400> 204
 Ala Arg Leu Arg His Gln Ser Asn Gly Leu Val Leu Ser Ser Pro Gly
 1 5 10 15
 Gly Leu Ile Lys Gly Gly Ser Leu Gly Asn Val Ser Val Ile Gly Pro
 20 25 30
 Ser Val Asn Thr Tyr Leu Ala Asn Ala Ser Ser Lys Trp Pro Gly Ala
 35 40 45
 Ala Phe Arg Thr Leu Arg Arg Phe His Asn Val Val Leu Arg Met Val
 50 55 60
 Phe Leu His Trp Ile Phe Phe Leu Pro Phe Gln Leu Tyr Lys Leu Phe
 65 70 75 80
 Tyr Glu Lys Gly Gly Asn Ala Lys Gly Ile Gly Val Gly Gly Asn Val
 85 90 95
 Lys Ile Leu Gln Asp Pro Ala Ser Ile Phe Gly Ala Gln Arg Glu Pro
 100 105 110
 Gly Ser Thr Phe Leu Asn Thr Gly Gly Thr Gly Gly Met Glu Ala Trp
 115 120 125
 Ser Gly Gly Ala Cys Gly Gln Thr Pro Ala Ala Leu Ser Thr Tyr His
 130 135 140
 Ile Met Ala Trp Gln Thr Ser Ser Pro Ser Lys His Arg Leu Leu Ala
 145 150 155 160
 Asp Ser Pro Gln Lys Asp Met Pro Gly Val Asp Ala Trp Asn Ser Leu
 165 170 175
 Leu Ile Tyr Trp Asn Pro Lys Ile Lys Gln
 180 185
 <210> 205
 <211> 249
 <212> PRT
 <213> Homo sapiens
 <400> 205
 Phe Lys Ile Val Ser Leu Phe Leu Tyr Lys Pro Ser Arg Leu Gln Lys
 1 5 10 15
 Phe Lys Asn Thr His Glu Val Gly Asn Cys Ile His Phe Leu Ser Thr

| 20 | | | | | 25 | | | | | 30 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | His | Ser | Met | Thr | Asp | Leu | Val | Val | Leu | Asn | Asn | Thr | Asn | Leu | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Gln | Ser | Ser | Leu | Asp | Gln | Lys | Phe | Asn | Ile | Gly | Ser | Ala | Lys | Ile |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Lys | Gly | Leu | Ala | Cys | Ala | Ser | Tyr | Arg | Phe | Gly | Arg | Ile | His | Phe | Gln |
| 65 | | | | 70 | | | | | | 75 | | | | | 80 |
| Val | His | Ala | Tyr | Cys | Trp | Leu | Asn | Ser | Ile | Pro | Cys | Ser | Tyr | Arg | Ile |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ile | Pro | Val | Phe | Leu | Leu | Ala | Lys | Gly | Leu | Asn | His | Phe | Leu | Pro | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Ile | Val | Cys | Phe | Pro | Tyr | Leu | Met | Ala | Leu | Leu | Ser | Ser | Lys | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Ile | Met | Ile | Gln | Val | Leu | Pro | Phe | Ile | Ser | Ser | Val | Ile | Tyr | Ser |
| | | 130 | | | | 135 | | | | | | 140 | | | |
| Asp | Met | Ser | Ser | Leu | Pro | Ser | Leu | His | Leu | Thr | Leu | Leu | Pro | Ser | Ser |
| 145 | | | | 150 | | | | | | 155 | | | | | 160 |
| Ile | Cys | Lys | Gly | Pro | His | Thr | Asn | Pro | Glu | Ser | Leu | Tyr | Phe | Lys | Ile |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Asn | Leu | Leu | Glu | Pro | Phe | His | Leu | Gln | Asn | Cys | Val | Ser | Ile | Tyr | His |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asn | Ile | Ser | Thr | Gly | Ile | Trp | His | Lys | Arg | Val | Thr | Ile | Met | Ala | Cys |
| | | 195 | | | | 200 | | | | | | 205 | | | |
| Val | Ser | His | Lys | Ile | Thr | Ala | Pro | Asn | Arg | Ile | Thr | Ser | Lys | Leu | Ala |
| | | 210 | | | | 215 | | | | | 220 | | | | |
| Tyr | Phe | Tyr | Ile | Asn | Pro | Pro | Lys | Asp | Asn | Cys | Arg | Ser | Ser | Ser | Lys |
| 225 | | | | 230 | | | | | | 235 | | | | | 240 |
| Ile | Pro | Asp | Met | Lys | Leu | Ala | Ile | Ala | | | | | | | |
| | | | | 245 | | | | | | | | | | | |

<210> 206
 <211> 240
 <212> PRT
 <213> Homo sapiens

<400> 206

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | His | Ser | His | Leu | His | Gln | Pro | Thr | Arg | Ala | Pro | Val | Gly | Glu | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Lys | Leu | Ser | Lys | Cys | Leu | Trp | Gly | Ser | Ser | Val | Gly | Ser | Leu | Arg | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Gly | Leu | Leu | Gly | Arg | Ala | Phe | Arg | His | Gly | Arg | Gly | Arg | Arg | Glu |
| | | 35 | | | | | 40 | | | | | 45 | | | |

Gly Thr Gln Asn Gln Glu Gly Val Gly Gly Ser Asp Leu Met Ser Gln
 50 55 60
 Lys Thr Phe Trp Lys Ser Gly Leu Pro Ala Leu Glu Gly Met Thr Leu
 65 70 75 80
 Ser Arg Val Pro Cys Lys Asp Ser Pro Glu Arg Leu Pro Asn Ser Ser
 85 90 95
 Arg Asp Pro Gly Ala Asp Cys His Pro Thr Arg Val Arg Pro Gly Arg
 100 105 110
 Cys Val Leu Pro Arg Ala Leu Gln Thr Phe Gly Ala Cys Lys Gly Asn
 115 120 125
 Gly Glu Ser Leu Trp Gln Arg Gln Arg Leu Gln Ser Glu Cys Lys Met
 130 135 140
 Ala Lys Ile Met Leu Leu Val Ile Leu Leu Phe Val Leu Ser Trp Ala
 145 150 155 160
 Pro Tyr Ser Ala Val Ala Leu Val Ala Phe Ala Gly Ala Val Ala Lys
 165 170 175
 Gly Leu Gly Lys Arg Leu Lys Val Trp Gly Gln Glu Gln Glu Ala Trp
 180 185 190
 Pro Ala Ser Pro Ser Gln Pro Asn Pro Gly Gln Pro Ser Ser His Pro
 195 200 205
 Arg Thr Ser Phe Thr Ala Tyr Ser Leu Pro Trp Val Arg Cys Pro Ala
 210 215 220
 Pro Gly Trp Val Gly Gly His Leu Val Pro Gly Ser Thr Arg Ala His
 225 230 235 240

<210> 207
 <211> 170
 <212> PRT
 <213> Homo sapiens

<400> 207

His Arg Ile Phe Lys Ala Phe Ser Gln Val Thr Phe Asp Cys Ile Asn
 1 5 10 15
 Ser Ile Phe Phe Leu Leu Leu Ile Leu Cys Phe Cys His Asn Leu Leu
 20 25 30
 Leu Leu Tyr Cys Ile Cys Leu Asn Lys Leu Leu Asn Leu Leu Phe
 35 40 45
 Leu Ile Val Leu Phe Phe Asn Leu His Thr Lys Asp Ile Ser Asn His
 50 55 60
 Ile Thr Ile Thr Ile Leu Lys Cys Ser Glu Phe Asp Tyr Ala Phe Thr
 65 70 75 80

Phe Ala Tyr Lys Cys Ile Cys Leu Asn Lys Leu Leu Asn Leu Leu Leu
85 90 95

Phe Leu Ile Val Leu Phe Phe Asn Leu Tyr Thr Leu Tyr Val Tyr Val
100 105 110

Leu Val Ile Ser Ile Leu Phe Phe Gln Val Phe Ser Asn Ile Lys Asn
115 120 125

Ser Ile Ser Ile Ser Cys Lys Thr Gly Met Val Leu Leu Asn Ser Leu
130 135 140

Ser Phe Phe Leu Gly Lys Pro Leu Ser Leu Phe Leu Phe Leu Lys Asp
145 150 155 160

Ser Phe Ala Met Tyr Ser Ile Leu Phe Trp
165 170

<210> 208
<211> 174
<212> PRT
<213> Homo sapiens

<400> 208

Thr Val Ser Val Thr Gln Tyr Ile His Ala Trp Ile Phe Ile Pro Val
1 5 10 15

Phe Leu Phe Ser Ile Cys Tyr Thr Leu His Ile Leu Gly His Cys Ser
20 25 30

Ser Arg Pro Asn Asp Arg Gly Gln Met Asn His Tyr Val Leu Leu Ser
35 40 45

Met Leu Lys Gly Lys Lys Ser Ile Asn Ser Met Phe Ile Tyr Cys Phe
50 55 60

Tyr Leu Pro Met Ile Phe Phe Ile Leu Gly Gln Lys Phe Asn Leu Ser
65 70 75 80

Tyr Ile Phe Gln Thr Phe Lys Met Phe Ala Val Ile Phe Ser Thr Ser
85 90 95

Trp Gln Gln Ile Cys Phe Arg Ile Cys Ser Leu Tyr Tyr Ser Cys Leu
100 105 110

Cys Val Cys His Thr Glu Ser Thr Phe Gln Lys Leu Leu Lys Glu Ile
115 120 125

Thr Glu Met Lys Val Met Asn Ala Ile Leu Leu Glu Ile Asn Phe Leu
130 135 140

Ser Lys Asp Asn Arg Gly Ser Val Leu Ser Glu Glu Pro Gly Ala Ile
145 150 155 160

Leu Lys Ser Leu Ile Ser Leu Pro Pro Phe His Gly Met Tyr
165 170

<210> 209

<211> 165
 <212> PRT
 <213> Homo sapiens

<400> 209

Gly Pro Arg Asp Leu Ser Thr Ser Leu Gly His Met Gly Trp Leu Arg
 1 5 10 15
 Ala Leu Gln Arg Glu Thr Leu Pro Gln Trp Gly Pro Arg Pro Val Lys
 20 25 30
 Arg Glu Ile Lys Thr Lys Ser Ala Asp Phe Gln Ser Ser Ser Phe Asn
 35 40 45
 Ile Ser Lys Ser His Lys Asn Tyr Ser Arg Glu Leu Val Glu Arg Leu
 50 55 60
 Glu Leu Gly Arg Lys Ala Gly Tyr Ile Phe Leu Phe Ser Asn Phe Ser
 65 70 75 80
 Ser Tyr Thr Trp His Leu Ser Ser Leu Leu Leu Leu Phe Arg Leu
 85 90 95
 Leu Trp Pro Gln Glu Gly Gly Met Leu Asp Gly Trp Arg Ala Arg Glu
 100 105 110
 Gly Leu Arg Cys Asn Ser Tyr Phe His Val Cys Asp Asn Ala Val Ala
 115 120 125
 Met Leu Phe Ser Glu Ala Ser Ser Cys Thr Gln Gly Val Leu Leu Met
 130 135 140
 Gln Arg Gly Arg Phe Gln Cys Leu Ala Val Val Tyr Leu Pro Cys Arg
 145 150 155 160
 Cys Ser Gly Gln Gln
 165

<210> 210
 <211> 167
 <212> PRT
 <213> Homo sapiens

<400> 210

Thr Ser His Thr His Gly Ser Ser Ser Met Ile His Thr Leu Thr Gly
 1 5 10 15
 Ile Asn Leu Pro Leu His Phe Trp Pro Arg Arg Thr Phe Ser Asp Trp
 20 25 30
 Gly Ser Lys Glu Ile Thr Glu Ile Ile Lys Arg Lys Ile Ile Ser Gln
 35 40 45
 Asp Ser Phe Ala Thr Tyr Leu Ala Leu Lys Leu Arg Phe Ser Glu His
 50 55 60
 Cys Ile Leu Pro Gln Thr Thr His Thr His Thr His Ile Glu Tyr Phe

| 65 | | | | | 70 | | | | | 75 | | | | | 80 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Lys | Ile | Arg | Asn | Trp | Ala | Thr | Tyr | Asn | Ser | Gly | Lys | Arg | His | Leu | Asn | | | | |
| | | | | 85 | | | | | 90 | | | | | 95 | | | | | |
| Gly | Thr | Glu | His | His | Ile | Tyr | Glu | Ser | Ser | Val | Gln | Arg | Ile | Ser | Glu | | | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | | | |
| Asn | Val | His | Lys | Val | Ser | Ala | Phe | His | Arg | Leu | Gly | Ile | Glu | Ala | Val | | | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | | | |
| Ala | Ile | Thr | Ile | Lys | Ile | Gln | Ala | Gln | Gly | Lys | Met | Lys | Leu | Gly | Val | | | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | | | |
| Lys | Gly | Ser | Glu | Ile | His | Phe | Arg | Lys | Ala | Phe | Lys | Ala | Arg | Lys | Met | | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | | | |
| Arg | Ser | Thr | Trp | Tyr | Val | Phe | | | | | | | | | | | | | |
| | | | | 165 | | | | | | | | | | | | | | | |

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<210> 211
<211> 202
<212> PRT
<213> Homo sapiens
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 $\langle 400 \rangle$ 211

| | | | | | | | | | | | | | | | |
|------------|-----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser 1 | Thr | Gly | Phe 5 | Phe | Ser | Met | Pro | Leu | Phe 10 | His | Phe | Gln | Pro | Ile 15 | Ser |
| Ser | Ile | His | Cys 20 | Leu | Ala | Ser | Tyr | Pro 25 | Asn | Cys | Thr | Lys | Pro 30 | Ala | Gln |
| Ser | Leu | Trp 35 | Glu | Asp | Phe | Glu | Asn 40 | Ala | Phe | Ser | Cys | Val 45 | Ala | Ser | Leu |
| Val 50 | Ser | Ile | Lys | Leu | Ser | Thr 55 | Thr | Met | Pro | Trp | Cys 60 | Gln | Cys | Ile | Leu |
| Ser 65 | Val | Gln | Cys | Ala | Glu 70 | Arg | Thr | His | Trp | Gln 75 | Leu | His | Tyr | Gln | Leu 80 |
| Ser | Leu | Phe | Cys | Pro 85 | Ser | Asn | Arg | Lys | Tyr 90 | Phe | Asn | Pro | Gly | Lys 95 | Ser |
| Ile | Arg | Val | Ser 100 | His | Ser | Phe | Ala | Glu 105 | Leu | Leu | Val | Ala | Trp 110 | Pro | Glu |
| Thr | Leu | Ser 115 | Ala | Ala | Pro | Val | Thr 120 | Gln | Trp | Pro | Phe | Ser 125 | Phe | Ser | Glu |
| Thr 130 | Phe | Phe | Leu | Asn | Leu | Cys 135 | Val | Pro | Cys | Leu | Asn 140 | Leu | Tyr | Trp | Leu |
| Ile 145 | Ser | Arg | Pro | Val | Lys 150 | Leu | Ser | Ile | Leu | Thr 155 | Pro | Ser | Leu | Pro | Ser 160 |
| Arg | Asn | Ala | Ile | Cys 165 | Leu | Ser | Phe | Leu | Ser 170 | Tyr | Leu | Leu | Leu | Pro 175 | Gly |

Phe Trp Glu Val Tyr Ala Leu Gly Asp Lys Tyr Pro Ser Glu Lys Lys
 180 185 190

Asn Thr Asn Phe Phe Lys Phe Phe Thr Pro
 195 200

<210> 212
 <211> 155
 <212> PRT
 <213> Homo sapiens

<400> 212

Met His Leu Pro Tyr Leu Leu Leu Ser Phe Pro Tyr Pro Gln Asn Ile
 1 5 10 15

Val Ser Leu Trp Ile Ala His Ser Trp Pro Asp Lys Gln Leu Ser Asn
 20 25 30

Thr Ile Tyr Asn Leu Ser Val Asn Ile Phe Leu Ser Pro Pro Leu Leu
 35 40 45

His Cys Lys Phe Ser Ser Met Gly Ser Cys Leu Val Tyr Ser Arg His
 50 55 60

Ser Gly Thr Asn His Asn Leu Trp Ser Glu Asn Cys Ile Leu Tyr His
 65 70 75 80

Gly Ser Thr Thr Lys Val Thr Leu Arg Thr Cys Pro Asp Gly Asn Phe
 85 90 95

Phe His Phe Gln Asn Val Ser Asp Pro Leu Ser Phe Gln Cys Leu Gln
 100 105 110

Val Ile Trp Val Tyr Thr Phe Glu Asn Lys Asn Phe Leu Gly Ile Ser
 115 120 125

Ile Leu Ile Phe Asn Ile Gln Ile Lys Cys Val Met Cys Phe Ile Leu
 130 135 140

Leu Lys Ser Phe Pro Ile Ser Tyr Phe Asn Lys
 145 150 155

<210> 213
 <211> 190
 <212> PRT
 <213> Homo sapiens

<400> 213

Lys Ala Thr Gln Lys His Ser Ser Thr Lys Trp Ser Ala Ser Asn Cys
 1 5 10 15

Ser Val Ser Gly Phe Tyr Asp Ala Glu Phe Gly Ser Ile Glu Ser Thr
 20 25 30

Val Ser Met Asp Cys Pro Asn Pro Ser Ser Lys Ile Val Asp Ile His
 35 40 45

Gly Leu Ser Gln Val His Cys Phe Ile Tyr Leu Phe Ile Tyr Leu Ile
 50 55 60
 Leu Asp Ser Arg Ala His Val Gln Val Cys Tyr Met Asp Ile Leu Cys
 65 70 75 80
 Asp Ala Asp Val Trp Val Ser Ile Glu Pro Val Thr Leu Ile Val Asn
 85 90 95
 Leu Val Pro Asn Trp Asn Trp Met Gln Gly Leu Ser Arg Ser Arg Thr
 100 105 110
 Gly Ser Ser Pro Pro Asp Leu Leu Gly Leu Asp Leu Leu Lys Asp Gln
 115 120 125
 Lys Gly Arg Arg Tyr Glu Leu Asp Ala Cys Thr Gln Tyr Ser His Ser
 130 135 140
 Val Phe Glu Ala Tyr Leu Asp Gln Gly Cys Asp Leu Leu Lys Gly Ile
 145 150 155 160
 Thr Lys Ala Thr Thr Leu Ser Ala Asn Lys Val Val Ser Asn Leu Ile
 165 170 175
 Ile Ile His Phe Leu Leu Leu His Phe Lys Ile Asp Thr Cys
 180 185 190

<210> 214
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 214

Thr Pro Ile Asp Ser Asp Leu Glu Val Arg Ala Lys Ala Tyr Pro Glu
 1 5 10 15
 Pro Pro Ser Leu Thr Pro Leu Phe Gln Phe Ser Phe Ser Gln Ile Ser
 20 25 30
 Pro Leu Gly Cys Ala Lys Pro Ser Trp Ile Gln Lys Phe His Phe Gln
 35 40 45
 Tyr Gly Tyr Cys Phe Gln Ser Ile Thr Pro Lys Asn Ser Arg Arg Lys
 50 55 60
 Lys Gly Ser Val Val Ile Phe Lys Ser Gln Asn His
 65 70 75

<210> 215
 <211> 169
 <212> PRT
 <213> Homo sapiens

<400> 215

Arg Asp Thr Ala Ile His Gly Val Phe Met Asn Leu Ser Leu Met Asn
 1 5 10 15

Ala Tyr Asp Met Phe Ile His Leu Phe Val Glu Ser Phe Asp Arg Phe
 20 25 30
 Ala Gln Asn Arg Glu Val Val Val Val Ala Val Trp Ile Trp Glu Gly
 35 40 45
 Glu Val Ser Phe Gly Gln Val Ile Ser Ala Tyr Gln Thr Ile Lys Gly
 50 55 60
 Ser Ala Phe Thr Glu Cys Trp Leu Gly Cys Asp Ser Cys Phe Ala Leu
 65 70 75 80
 His Ser Leu Lys Arg Leu Tyr Val Ser Pro Leu Cys Pro Phe Pro Ser
 85 90 95
 His Leu Lys Ile Asn Arg Arg Glu Asn Asn Val Ile Arg Gly Ser Asn
 100 105 110
 Cys Ile Tyr Cys Leu Cys Arg Val Val Val Asp Thr Gly Met Phe Pro
 115 120 125
 Tyr Ser Leu Cys Leu Ala His Leu Lys Cys Val Ile Ile Asn Asp Ile
 130 135 140
 Leu Lys Asn Thr Glu Gln Leu Val Leu Gly Ile Cys Pro Thr Ser Tyr
 145 150 155 160
 Asp Ser Ser Ala Ile Leu Ile Ser Leu
 165

<210> 216
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 216

Lys Arg Ser Leu Asp Tyr Tyr Tyr Ile Ile Gln Met Cys Met Cys Val
 1 5 10 15
 Ser Ala Met Tyr Leu Leu Leu Leu Ser Arg Val Tyr Asn Met Lys Leu
 20 25 30
 Leu Thr Ile Ile Gln Glu Ile Arg Cys Met Asn Leu Val Gly Asn Val
 35 40 45
 Ser Tyr Tyr Asn Phe Tyr Asn Ile Ser Phe Lys His Phe Asp Ala Phe
 50 55 60
 Leu Leu Phe Lys Arg Leu Arg Asn Glu Asn Ile Lys Ile Asn Ile Phe
 65 70 75 80
 Leu Lys Cys Cys Ala Phe Tyr Leu Met Leu Leu Leu Ile Arg Ser Cys
 85 90 95
 Val Ile Leu Phe Leu Ile Glu Phe Asp Ile Arg Asn Lys Gly Arg
 100 105 110

<210> 217
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 217

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Leu Thr Tyr Tyr Leu Gln Arg Asn Leu Ser Lys Pro Phe Leu Leu Tyr
1      5      10      15
Leu Ala Ser Arg Ile Pro Leu Pro Thr Phe Asn His Pro Gly Thr Leu
20      25      30
Tyr Thr Ser Ile Leu Thr Leu Phe Ile Leu Pro Phe Val Ile Ile Ala
35      40      45
Ser Cys Phe Arg Ala Pro Leu Asn Thr Lys Val Phe Glu Ser Arg Asn
50      55      60
Ser Lys His Phe Lys Phe Leu Ser Leu His Met Gln Leu Leu Leu His
65      70      75      80
Ser Gln Tyr Thr Val Asn Ala Asp Ile Glu Arg Ile Ser Leu Leu Glu
85      90      95
Cys Asn Ser Leu Arg Val Ser Asn Ser Ser Ser Leu Lys Thr Asn Pro
100     105     110
Thr Lys Leu Thr Ile Val Ser Thr Thr Lys Ser Leu Gln Val Ile Asn
115     120     125
Leu Thr Ile Glu Val Phe Ile Phe Leu Leu Gly Lys Pro Gly Gln Pro
130     135     140
Gln Gly Pro Thr Tyr Pro Gly Val Thr Leu Lys Val Met Arg Phe Pro
145     150     155     160
Ser Lys Met Thr Lys Leu Ser Gly Phe Ser Gly Met His Thr His Cys
165     170     175
Val Thr Ile Asn
180

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<210> 218
 <211> 219
 <212> PRT
 <213> Homo sapiens

<400> 218

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His Ile Glu Cys Ala Ile Pro Ser Asn Phe Cys Phe Asn Asn Cys Lys
1      5      10      15
His Ile Phe Cys Lys Tyr Asn Phe Ala Ser Arg Ala Ile Cys Phe Thr
20      25      30
Ser Leu Ile Ile Phe Cys Tyr Thr Asp Leu Gln Val Ile Leu His Lys
35      40      45

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Val Gly Leu Asn Leu Lys Cys Leu Leu Phe Ile Lys Cys Cys Pro Leu
 50 55 60
 Leu Met Phe Ile Ile Tyr Ile Phe Leu Val Leu Asn Leu Asp Trp Lys
 65 70 75 80
 Asn Met Leu Cys Lys Ile His Gly Asn Ile Phe Arg Thr Asn Phe Tyr
 85 90 95
 Leu Tyr Arg Trp Leu Ile Ser Cys Ser Glu Asn Lys Thr Met Asn Lys
 100 105 110
 Gln Cys Phe Ile Tyr Ser Ser Phe Asn Val Ser Gln Val Asn Thr Tyr
 115 120 125
 Leu Leu Tyr Phe Leu Ser Ala Val Thr Pro Pro Phe Leu Leu Phe Ser
 130 135 140
 Ser Val Trp Leu Cys Pro Arg Ala Asn Ser Val Pro Ser Ile Arg Leu
 145 150 155 160
 Ser Val Tyr Ser Thr His Gly Leu Glu Leu Lys Trp Leu Gly Asn Cys
 165 170 175
 Asn Thr Val Asp Trp Ser His Phe Lys Leu Ala Gln Thr Trp Ser Tyr
 180 185 190
 Cys Ile Pro Lys Met Asn Ser Leu Ile Arg Thr Thr Phe Pro Thr Phe
 195 200 205
 Ser Cys Leu Leu Lys Pro Pro Ser Pro Leu Pro
 210 215
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 Cys Asn Lys Leu Ser Gln Val Ser Cys Phe Gln Val Phe Val Phe Leu
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 Val Asn Tyr Gln Thr Arg Gly Phe Gly Glu Leu Leu Glu Phe Ala Ile
 35 40 45
 Gly Val Arg Ser Glu Asp Asn Leu Val Cys Thr Val Phe Ser Leu Thr
 50 55 60
 Leu Trp Gly Leu Gly Met Val Gly Gly Arg Glu Ser Arg Cys Val Lys
 65 70 75 80
 Leu Thr Val Ile Phe Leu Pro Lys Lys Lys Leu Ser Pro Gln Gly Tyr
 85 90 95
 Lys Glu Ala Thr Thr Val Phe Pro Thr Leu His Thr Lys Phe Gln Gln

100 105 110
 Trp Asn Phe Met Ile Tyr Leu Gly Asn Tyr Ile Trp Arg Asn Val Leu
 115 120 125
 Lys Leu Gln Ile Leu Thr Lys Asp Phe Leu Lys Tyr Ser Asn Lys Val
 130 135 140
 Ile Asp Cys Asn Gln Asn Ser His Leu Pro Lys Arg Arg Trp Tyr Ser
 145 150 155 160
 Ile Leu Lys Val Ile Ile Leu Leu Gly Lys Gln Cys Leu Pro Val Leu
 165 170 175
 Ile Ile Ile Leu Glu Thr Thr Val Phe Ile Asn Val Ser Glu Ile Tyr
 180 185 190
 Asn Leu Asn Glu Ile Leu Met Pro Lys Met Asn Thr Gly His Ile Phe
 195 200 205
 Lys His Tyr
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 1 5 10 15
 Arg Ser Thr Ile Val Phe Ser Leu Phe Pro Ile Val Ile Arg Asp Arg
 20 25 30
 Ser Ser Ser Leu Phe Phe Leu Leu Gln Ser Phe Ile Trp Asn Leu Phe
 35 40 45
 Trp Cys Leu Ile His Lys Tyr Leu Ile Cys Leu Pro Asn Arg Val Lys
 50 55 60
 Met Ile Pro Val Met Leu Leu Ile Cys Val Leu Arg Arg Lys Lys Ser
 65 70 75 80
 Gly Ser Thr Met Ala Leu Gly Ile Leu His Lys Pro Met Lys Ala Val
 85 90 95
 Thr Phe Val Asn Val Phe Leu Val Glu Thr Ser Val Glu Asn His Cys
 100 105 110
 Cys Ile Ile Val Leu Ser Ser Arg Thr Tyr Ser Gly Asp Gly Asn Thr
 115 120 125
 Leu Leu Tyr Phe Pro Ile Trp Tyr Ser Leu Thr Thr Cys Gly Tyr Gln
 130 135 140
 Val Leu Glu Met Trp Leu Gly Asp Gly Thr Glu Ile Phe Ser Leu Ile
 145 150 155 160

Leu Ser Val Ile Tyr Thr Thr Ala Tyr Phe Ile Glu Ser Thr Phe Ser
165 170 175

Ile

